Journal of
Applied Polymer Science

CONTENTS

Volume 92

ISSUE NUMBER 1 / APRIL 5, 2004

Miscibility of Poly(vinylidene fluoride) and Atactic Poly(methyl methacrylate)
C. Huang and L. Zhang 1
Published online 27 January 2004

Direct Fluorination of the Polyimide Matrimid® 5218: The Formation Kinetics and Physicochemical Properties of the Fluorinated Layers
A. P. Kharitonov, Y. L. Moskvin, D. A. Syrtsova, V. M. Starov, and V. V. Teplyakov 6
Published online 27 January 2004

Effect of Alkali and Ultraviolet (UV) Radiation Pretreatment on Physical and Mechanical Properties of 1,6-Hexanediol Diacrylate–Grafted Jute Yarn by UV Radiation
M. A. Khan, S. Shehrzade, and M. M. Hassan 18
Published online 27 January 2004

Steady Viscosity of a Polymer/Liquid Crystal Biphasic System
I. Yang and W. Y. Lai 25
Published online 27 January 2004

Synthesis and Characterization of Poly(*o*- and *m*-Amino Benzyl Amine) and the Copolymers with Aniline. Study with Cu(II)
B. L. Rivas and C. O. Sánchez 31
Published online 27 January 2004

Polyaniline–Nylon 6 Composite Fabric for Ammonia Gas Sensor
K. H. Hong, K. W. Oh, and T. J. Kang 37
Published online 27 January 2004

Cure Properties of Methacrylate-Type Prepolymer That Include Cyclohexane Moiety
W. Gun Kim and J. Young Lee 43
Published online 27 January 2004

Acetylation of Sugarcane Bagasse Hemicelluloses Under Mild Reaction Conditions by Using NBS as a Catalyst
X.-F. Sun, R.-C. Sun, L. Zhao, and J.-X. Sun 53
Published online 27 January 2004

Photopolymerization of an Expanding Monomer with an Aromatic Dioxirane
R. E. Smith, C. S. Pinzino, C. C. Chappelow, A. J. Holder, E. L. Kostoryz,[1] J. R. Guthrie, M. Miller, D. M. Yourtee, and J. D. Eick **62**
Published online 27 January 2004

Effects of Copolyester/Polycarbonate Blend Composition on the Thermal Diffusivity of Dye Transfer Printing
T. Miyata, K. Inaki, J. Morikawa, R. Satoto, and T. Hashimoto **72**
Published online 27 January 2004

Miscibility and Properties of Blend Materials from Waterborne Polyurethane and Carboxymethyl Konjac Glucomannan
G. Yang, Q. Huang, L. Zhang, J. Zhou, and S. Gao **77**
Published online 27 January 2004

Structural Changes and Mechanical Performance of Recycled Poly(vinyl chloride) Bottles Exposed to Ultraviolet Light at 313 nm
N. Sombatsompop and K. Sungsanit **84**
Published online 27 January 2004

Wood Flour: A New Filler for the Rubber Processing Industry. III. Cure Characteristics and Mechanical Properties of Nitrile Butadiene Rubber Compounds Filled by Wood Flour in the Presence of Phenol-Formaldehyde Resin
T. G. Vladkova, P. D. Dineff, and D. N. Gospodinova **95**
Published online 27 January 2004

Modification of LLDPE Using Esterified Styrene Maleic Anhydride Copolymer: Study of Its Properties and Environmental Degradability
J. Pal, H. Singh, and A. K. Ghosh **102**
Published online 27 January 2004

Modifying Adhesion of Linear Low-Density Polyethylene to Polypropylene by Blending with a Homogeneous Ethylene Copolymer
B. C. Poon, S. P. Chum, A. Hiltner, and E. Baer **109**
Published online 27 January 2004

Formation of Thermosensitive Water-Soluble Copolymers with Phosphinic Acid Groups and the Thermosensitivity of the Copolymers and Copolymer/Metal Complexes
T. Nonaka, Y. Hanada, T. Watanabe, T. Ogata, and S. Kurihara **116**
Published online 27 January 2004

Experimental Investigations of Polypropylene and Poly(vinyl chloride) Composites Filled with Plerospheres
M. Wang, Z. Shen, C. Cai, S. Ma, and Y. Xing **126**
Published online 27 January 2004

Blends of Ultrasonically Devulcanized and Virgin Carbon Black Filled Ethylene–Propylene–Diene Monomer Rubbers
J. Yun and A. I. Isayev **132**
Published online 27 January 2004

Mechanical and Fracture Behavior of an Artificially Ultraviolet-Irradiated Poly(ethylene-carbon monoxide) Copolymer
J. Abanto-Bueno and J. Lambros **139**
Published online 27 January 2004

Crystallization of Poly(tetramethylene succinate) in Blends with Poly(ϵ-caprolactone) and Poly(ethylene terephthalate)
K. F. Chong, H. Schmidt, C. Kummerlöwe, and H. W. Kammer **149**
Published online 27 January 2004

Reaction Study of Water-Borne Polyurethanes Based on Isophorone Diisocyanate, Dimethylol Propionic Acid, and Poly(hexane neopentyl adipate glycol)
S. Zhang, W. Miao, and Y. Zhou **161**
Published online 27 January 2004

Design and Synthesis of New Photoresist Materials for ArF Lithography
H.-U. Seo, S.-H. Jin, S.-J. Choi, Y.-S. Gal, and K. T. Lim **165**
Published online 27 January 2004

Doping Level Change of Polyaniline Film During Its Electrochemical Growth Process
C. Liu, J. Zhang, G. Shi, and F. Chen **171**
Published online 27 January 2004

Synthesis and Characterization of Novel Aromatic Condensation Polymers Containing Rigid Benzoxazole Pendent Groups
J.-H. Kim, Y. H. Kim, Y. J. Kim, J. C. Won, and K.-Y. Choi **178**
Published online 27 January 2004

Synthesis and Characterization of Poly(ethylene isophthalate-*co*-ethylene terephthalate) Copolyesters
L. Finelli, M. Fiorini, V. Siracusa, N. Lotti, and A. Munari **186**
Published online 3 February 2004

Thermotropic Liquid-Crystalline Polyphosphate Esters Containing Phenolphthalein Moiety
D. Srividhya, S. Senthil and and P. Kannan **194**
Published online 3 February 2004

Effects of Calcium Carbonate and Its Purity on Crystallization and Melting Behavior, Mechanical Properties, and Processability of Syndiotactic Polypropylene
P. Supaphol, W. Harnsiri, and Jirawut junkasem **201**
Published online 3 February 2004

Optical Properties of Ethyl-Cyanoethyl Cellulose/Poly(acrylic acid) Cholesteric Liquid Crystalline Composite Films
L. Wang, X. Wang, and Y. Huang **213**
Published online 3 February 2004

Synthesis of Polystyrene-Supported Dithiocarbamates and Their Complexation with Metal Ions
A. McClain and Y.-L. Hsieh **218**
Published online 3 February 2004

Creep–Recovery Experimental Investigation of Crude Oil–Polymer Emulsions
M. T. Ghannam **226**
Published online 3 February 2004

Effect of Reactive Diluents on Properties of Unsaturated Polyester/Montmorillonite Nanocomposites
H.-G. Kim, D.-H. Oh, H.-B. Lee, and and K.-E. Min **238**
Published online 3 February 2004

Wood Bonding by Mechanically-Induced *in Situ* Welding of Polymeric Structural Wood Constituents
B. Gfeller, M. Properzi, M. Zanetti, A. Pizzi, F. Pichelin, M. Lehmann, and L. Delmotte **243**
Published online 3 February 2004

Melt Rheology and Morphology of Uncompatibilized and *In Situ* Compatibilized Nylon-6/Ethylene Propylene Rubber Blends
Z. Oommen, S. R. Zachariah, S. Thomas, G. Groeninckx, P. Moldenaers, and J. Mewis **252**
Published online 3 February 2004

Biodegradation of Physicochemically Treated LDPE by a Consortium of Filamentous Fungi
A. Manzur, M. Limón-González, and E. Favela-Torres **265**
Published online 3 February 2004

Synthesis, Characterization, and Catalytic Activity of 4 mol % *N,N'*-Methylene Bisacrylamide Crosslinked Poly(acrylic acid)–Metal Complexes
M. John, J. Jose, and B. Mathew **272**
Published online 3 February 2004

Synergistic Effect between Hindered Amine Light Stabilizers and Partially Hindered Oligomeric Amines in Polyethylene
A. Rosales Jasso, M. L. Berlanga Duarte, and N. S. Allen **280**
Published online 3 February 2004

A Novel Chemically and Mechanically Stable Glycerol-Based Crosslinked Polystyrene Support for Polypeptide Synthesis: A Comparative Study with Merrifield Resin
P. G. Sasikumar, K. S. Kumar, and V. N. Rajasekharan Pillai **288**
Published online 3 February 2004

Synthesis and Characterization of Biodegradable Block Copolymers of Poly(propylene fumarate-*co*-sebacate)-*co*-poly(ethylene glycol) and Poly(ethylene fumarate-*co*-sebacate)-*co*-poly(ethylene glycol)
F. Najafi and M. N. Sarbolouki **295**
Published online 3 February 2004

Preparation of Polyhexamethyleneadipamide Prepolymer by a Low-Temperature Process
C. D. Papaspyrides, S. N. Vouyiouka, and I. V. Bletsos **301**
Published online 3 February 2004

Rheological and Thermomechanical Properties of Long-Chain-Branched Polyethylene Prepared by Slurry Polymerization with Metallocene Catalysts
E. Kolodka, W.-J. Wang, S. Zhu, and A. Hamielec **307**
Published online 3 February 2004

Fumaryl Chloride and Maleic Anhydride–Derived Crosslinked Functional Polymers for Nonlinear Optical Waveguide Applications
S. Maaref, Z. Roz, S.-S. Sun, K. Seo, K. Winston, and C. E. Bonner **317**
Published online 3 February 2004

Selection of Top Layer Materials for Gas–Liquid Membrane Contactors
D. C. Nymeijer, B. Folkers, I. Breebaart, M. H. V. Mulder, and M. Wessling **323**
Published online 3 February 2004

Optical and Surface Properties of Whey Protein Isolate Coatings on Plastic Films as Influenced by Substrate, Protein Concentration, and Plasticizer Type
S.-I. Hong, J. H. Han, and J. M. Krochta **335**
Published online 3 February 2004

Effects of Glycerol and PE-*g*-MA on Morphology, Thermal and Tensile Properties of LDPE and Rice Starch Blends
Y.-J. Wang, W. Liu, and Z. Sun **344**
Published online 3 February 2004

Synthesis and Properties of Polyurethane Resins Based on Liquefied Wood
Y. Wei, F. Cheng, H. Li, and J. Yu **351**
Published online 3 February 2004

Morphology, Rheology, and Mechanical Properties of Dynamically Cured EPDM/PP Blend: Effect of Curing Agent Dose Variation
H.-W. Xiao, S.-Q. Huang, and T. Jiang **357**
Published online 3 February 2004

Biocidal Polystyrene Beads. III. Comparison of *N*-halamine and Quat Functional Groups
Y. Chen, S. D. Worley, T. S. Huang, J. Weese, J. Kim, C.-I. Wei, and J. F. Williams **363**
Published online 3 February 2004

Biocidal Polystyrene Beads. IV. Functionalized Methylated Polystyrene
Y. Chen, S. D. Worley, T. S. Huang, J. Weese, J. Kim, C-I. Wei, and J. F. Williams **368**
Published online 3 February 2004

Influences of Co-monomers and Electrolyte Acidity on Morphological Structure of Copper-in-Copolymer Gradient Film
J. Tang, Q. Chen, H. Liu, and Y. Wang **373**
Published online 3 February 2004

Kinetic Study by FTIR, TMA, and DSC of the Curing of a Mixture of DGEBA Resin and γ-Butyrolactone Catalyzed by Ytterbium Triflate
X. Ramis, J. M. Salla, C. Mas, A. Mantecón, and A. Serra **381**
Published online 3 February 2004

Positive Temperature Coefficient Behavior of Polymer Composites Having a High Melting Temperature
J.-i. Kim, P. H. Kang, and Y. C. Nho **394**
Published online 3 February 2004

Effect of a Polymerizable Cosurfactant on the Microstructure and Drug-Release Properties of Nanoparticles Synthesized through Emulsion Polymerization
S. Bhawal, L. H. Reddy, R. S. R. Murthy, and S. Devi **402**
Published online 3 February 2004

Synergistic Effect of a Phosphorus–Nitrogen Flame Retardant on Engineering Plastics
T.-S. Leu and C.-S. Wang **410**
Published online 3 February 2004

Studies on the Fabrication of Strong-acid/Weak-base Amphoteric Ion Exchange Fibers and Their Adsorption Property for Amino Acids
R. Fu, F. Wang, L. Tang, Y. Lei, N. Lui, and M. Liang **418**
Published online 3 February 2004

Thermomechanical Behavior of Poly(vinyl alcohol) and Sugar Cane Bagasse Composites
E. Chiellini, P. Cinelli, R. Solaro, and M. Laus **426**
Published online 3 February 2004

Control of Particle Size and Carboxyl Group Distribution in Soap-Free Emulsion Copolymerization of Methyl Methacrylate–Ethyl Acrylate–Acrylic Acid
K. Kang, C. Y. Kan, Y. Du, and D. S. Liu **433**
Published online 3 February 2004

Engineering the Friction-and-Wear Behavior of Polyelectrolyte Multilayer Nanoassemblies Through Block Copolymer Surface Capping, Metallic Nanoparticles, and Multiwall Carbon Nanotubes
P. V. Pavoor, B. P. Gearing, R. E. Gorga, A. Bellare, and R. E. Cohen **439**
Published online 3 February 2004

Powder-Shape Analysis and Sintering Behavior of High-Density Polyethylene Powders for Rotational Molding
A. Greco and A. Maffezzoli **449**
Published online 3 February 2004

Study of the Effect of Poly(acrylonitrile-*co*-butadiene-*co*-styrene) on the Mechanical Properties of an Epoxy System
A. Torres, I. López-de-Ullibarri, M. J. Abad, L. Barral, J. Cano, S. García-Garabal, F. J. Díez, J. López, and C. Ramírez, **461**
Published online 3 February 2004

Fluorescence Property of Polycarbonate Related to Radial-Pattern Formation
M. Tanimura, M. Tachibana, and K. Kojima **468**
Published online 3 February 2004

On Line Measurement of Crystallinity of Nylon 6 Nanocomposites by Laser Raman Spectroscopy and Neural Networks
Z. Ergungor, C. Batur, and M. Cakmak **474**
Published online 3 February 2004

Crystallization Behavior of Starch-Filled Polypropylene
W. Liu, Y.-J. Wang, and Z. Sun **484**
Published online 3 February 2004

Weathering Studies of Epoxidized and Hydroxy-Fluoroester Pendent Guayule Rubber in Powder Coatings
S. Gupta, S. K. Mendon, and S. F. Thames **493**
Published online 3 February 2004

Synthesis and Characterization of Organic–Inorganic Hybrids Based on Epoxy Resin and 3-Glycidyloxypropyltrimethoxysilane
J. Macan, H. Ivankovic, M. Ivankovic, and H. J. Mencer **498**
Published online 3 February 2004

Kinetics of Water Absorption and Hygrothermal Aging Rubber Toughened Poly(Butylene Terephthalate) With and Without Short Glass Fiber Reinforcement
B. N. Yow, U. S. Ishiaku, Z. A. Mohd Ishak, and J. Karger-Kocsis **506**
Published online 3 February 2004

Vitamin A Microencapsulation Within Poly(methyl methacrylate)-*g*-Polyethylenimine Microspheres: Localized Proton Buffering Effect on Vitamin A Stability
J. S. Lee, Y. S. Nam, B.-Y. Kang, S.-H. Han, and I.-S. Chang **517**
Published online 3 February 2004

A Visco-Hyperelastic Constitutive Model to Characterize Both Tensile and Compressive Behavior of Rubber
V. P. W. Shim, L. M. Yang, C. T. Lim, and P. H. Law **523**
Published online 3 February 2004

Synthesis and Characterization of PBMA-*b*-PDMS-*b*-PBMA Copolymers by Atom Transfer Radical Polymerization
H. Peng, S. Cheng, and Z. Fan **532**
Published online 3 February 2004

On the Molecular Weight Distribution Polydispersity of Continuous Living-Radical Polymerization
F. Joseph Schork and W. Smulders **539**
Published online 3 February 2004

Morphology and Mechanical Properties of Layered Silicate Reinforced Natural and Polyurethane Rubber Blends Produced by Latex Compounding
S. Varghese, K. G. Gatos, A. A. Apostolov, and J. Karger-Kocsis **543**
Published online 3 February 2004

Polypropylene/Montmorillonite Composites and Their Application in Hybrid Fiber Preparation by Melt-Spinning
X. Zhang, M. Yang, Y. Zhao, S. Zhang, X. Dong, X. Liu, D. Wang,[1] and D. Xu **552**
Published online 3 February 2004

Characterization of Films from Chitosan and Quaternized Poly(4-vinyl-*N*-butyl) Pyridine Solutions
C. Liu and C. Xiao **559**
Published online 3 February 2004

PVC/Montmorillonite Nanocomposites Based on a Thermally Stable, Rigid-Rod Aromatic Amine Modifier
Z.-M. Liang, C.-Y. Wan, Y. Zhang, P. Wei, and J. Yin **567**
Published online 3 February 2004

Preparation of Asymmetric PEEKWC Flat Membranes with Different Microstructures by Wet Phase Inversion
M. G. Buonomenna, A. Figoli, J. C. Jansen, and E. Drioli **576**
Published online 3 February 2004

Studies on the Dielectric Properties of Poly(*o*-toluidine) and Poly(*o*-toluidine-aniline) Copolymer
H. John, R. M. Thomas, K. T. Mathew, and R. Joseph **592**
Published online 3 February 2004

Proliferation Rate of Fibroblast Cells on Polyethylene Surfaces with Wettability Gradient
J.-H. Choee, S. J. Lee, Y. M. Lee, J. M. Rhee, H. B. Lee, and G. Khang **599**
Published online 3 February 2004

Chromatographic Performance of Monodisperse–Macroporous Particles Produced by "Modified Seeded Polymerization." I: Effect of Monomer/Seed Latex Ratio
E. Unsal, S. T. Camli, S. Senel, and A. Tuncel **607**
Published online 3 February 2004

Synthesis and Properties of Acrylic-Based Superabsorbent
X.-p. Chen, G.-r. Shan, J. Huang, Z.-m. Huang, and Z.-x. Weng **619**
Published online 3 February 2004

Curing Behaviors of Korean *Dendropanax* Lacquer Determined by Chemical and Physical Measures
B.-H. Lee and H.-J. Kim **625**
Published online 3 February 2004

Enhanced Corrosion Prevention Effect of Polysulfone–Clay Nanocomposite Materials Prepared by Solution Dispersion
J.-M. Yeh, C.-L. Chen, Y.-C. Chen, C.-Y. Ma, H.-Y. Huang, and Y.-H. Yu **631**
Published online 3 February 2004

Influence of the Clay Modification and Compatibilizer on the Structure and Mechanical Properties of Ethylene–Propylene–Diene Rubber/Montmorillonite Composites
H. Zheng, Y. Zhang, Z. Peng, and Y. Zhang **638**
Published online 3 February 2004

Hydrophobically Modified Acrylamide-Based Polybetaines. I. Synthesis, Characterization, and Stimuli-Responsive Solution Behavior
K. M. Johnson, M. J. Fevola, and C. L. McCormick **647**
Published online 3 February 2004

Hydrophobically Modified Acrylamide-Based Polybetaines. II. Interaction with Surfactants in Aqueous Solution
K. M. Johnson, M. J. Fevola, R. Y. Lochhead, and C. L. McCormick **658**
Published online 3 February 2004

NOTE
Low-Volatility Acetals To Upgrade the Performance of Melamine–Urea–Formaldehyde Wood Adhesive Resins
M. Zanetti, A. Pizzi, and P. Faucher
Published online 3 February 2004 **672**

ERRATA
Permeability of Semicrystalline Polymers to Toluene/Methanol Mixture
C. Gagnard, Y. Germain, P. Keraudren, and B. Barrière **676**

Preparation and Properties of Keratin-Poly(vinyl alcohol) Blend Fiber
K. Katoh, M. Shibayama, T. Tanabe, and K. Yamauchi **683**

Degradation of Polyethylene During Extrusion. II. Degradation of Low-Density Polyethylene, Linear Low-Density Polyethylene, and High-Density Polyethylene in Film Extrusion
T. Andersson, B. Stålbom, and B. Wesslén **684**

Phase Structural Analyses of Polyethylene Extrusion Coatings on High-Density Papers. I. Monoclinic Crystallinity
K. M. Furuheim, D. E. Axelson, H. W. Anthonsen, and T. Helle **686**

Phase Structural Analyses of Polyethylene Extrusion Coatings on High-Density Papers. II. Influence of Paper Surface Properties on the Polyethylene Morphology
K. M. Furuheim, D. E. Axelson, H. W. Anthonsen, and T. Helle **686**

Phase Structural Analyses of Polyethylene Coatings on High-Density Papers. III. Determination of the Crystallite Thicknesses by T_1 Measurements
K. M. Furuheim, D. E. Axelson, H. W. Anthonsen, and T. Helle **686**

ISSUE NUMBER 2 / APRIL 15, 2004

Reactive Blends of Epoxy Resin (DGEBA) Crosslinked by Anionically Polymerized Polycaprolactam: Process of Epoxy Cure and Kinetics of Decomposition
A. Gupta, R. Singhal, and A. K. Nagpal **687**
Published online 9 February 2004

Preparation and Properties of Styrene–Butadiene Rubber Based Nanocomposites: The Influence of the Structural and Processing Parameters
S. Sadhu and A. K. Bhowmick **698**
Published online 9 February 2004

Synthesis and Coating Characteristics of Novel Calcium-Containing Poly(urethane ethers)
R. Jayakumar, Y.-S. Lee, and S. Nanjundan **710**
Published online 9 February 2004

A Novel Method for the Preparation of Monocarboxyl-End-Grouped Polycaprolactam with an Adjustable Molecular Weight
Y. Zhang, Q. Zhang, K. Cheng, and J. Xu **722**
Published online 9 February 2004

Adsorption of Cu(II) Ions from an Aqueous Solution by Crosslinked Amphoteric Starch
S.-M. Xu, S. Feng, F. Yue, and J.-D. Wang **728**
Published online 9 February 2004

Film-Forming Process from Globular Polytetrafluoroethylene Latex Particles
Th. Dürrschmidt and H. Hoffmann **733**
Published online 9 February 2004

Binary Blends Based on Poly(*N*-isopropylacrylamide): Miscibility Studies with PVA, PVP, and PAA
V. Mano, M. E. Scarpelli Ribeiro e Silva, N. Barbani, and P. Giusti **743**
Published online 9 February 2004

Polymers with Palladium Nanoparticles as Active Membrane Materials
J. Yu, R. Y. F. Liu, B. Poon, S. Nazarenko, T. Koloski, T. Vargo, A. Hiltner, and E. Baer **749**
Published online 9 February 2004

Cure Study of an Acrylic Resin to Develop Natural Fiber Composites
T. Behzad and M. Sain **757**
Published online 9 February 2004

Effect of Maleic Acid Content on Network Structure and Swelling Properties of Poly(*N*-isopropylacrylamide-*co*-maleic acid) Polyelectrolyte Hydrogels
T. Çaykara **763**
Published online 9 February 2004

Monohydroxy-Hydrazone-Functionalized Thermally Crosslinked Polymers for Nonlinear Optics
R. K. Singh, J. O. Stoffer, T. D. Flaim, D. B. Hall, and J. M. Torkelson **770**
Published online 11 February 2004

Effects of Acrylic-Based Processing Aids on Processibility, Rheology, Thermal and Structural Stability, and Mechanical Properties of PVC/Wood–Sawdust Composites
N. Sombatsompop and C. Phromchirasuk **782**
Published online 11 February 2004

Synthesis of Resol–Layered Silicate Nanocomposites by Reaction Exfoliation with Acid-Modified Montmorillonite
H. Wang, T. Zhao, Y. Yan, and Y. Yu **791**
Published online 11 February 2004

Synthesis and Characterization of Epoxidized Styrene–Butadiene Rubber/Silicon Dioxide Hybrid Materials
M. A. de Luca, T. E. Machado, R. B. Notti, and M. M. Jacobi **798**
Published online 11 February 2004

Effects of the Blending Sequence in Polyolefin Ternary Blends
M. H. Ha, M. S. Kim, B. K. Kim, W. Kim, M. C. Lee, and H. D. Kim **804**
Published online 11 February 2004

Synthesis and Tensile Properties of a Novel Composite of *Chlorella* and Polyethylene
T. Otsuki, F. Zhang, H. Kabeya, and T. Hirotsu **812**
Published online 11 February 2004

Studies on Castor Oil–Based Polyurethane/ Polyacrylonitrile Interpenetrating Polymer Network for Toughening of Unsaturated Polyester Resin
S. Guhanathan, R. Hariharan, and M. Sarojadevi **817**
Published online 11 February 2004

Detection of Residual Acidic Groups in Several Poly(*N*-alkyl methacrylate)s Using Photophysical and Photochemical Probes
M. Christoff, S. B. Yamaki, M. G. de Oliveira, and T. D. Z. Atvars **830**
Published online 11 February 2004

Kinetic Analysis of Poly(*N*-isopropylacrylamide-*co*-dimethylaminoethyl methacrylate) Microgel Latex Formation
Y. Zhang, L. S. Zha, and S. K. Fu **839**
Published online 11 February 2004

Gallium Recovery from Bayer's Liquor Using Hydroxamic Acid Resin
P. Selvi, M. Ramasami, M. H. P. Samuel, R. Sripriya, K. Senthilkumar, P. Adaikkalam, and G. N. Srinivasan **847**
Published online 11 February 2004

Piezoelectricity of Vinylidenefluoride–Trifluoroethylene Copolymer Films in Various Poling Conditions
U. Sathanon, S. Fukura, A. Sekiguchi, K. Ogino, and S. Miyata **856**
Published online 11 February 2004

Physical Characteristics of Sweet Potato Pulp/Polycaprolactone Blends
E.-J. Lee, D.-K. Kweon, B.-K. Koh, and S.-T. Lim **861**
Published online 11 February 2004

New Postfunctional Method To Synthesize C_{60}-Containing Poly(ethylene oxide)
Z. Li, P. Shao, and J. Qin **867**
Published online 11 February 2004

On the Use of Extruders as Chemical Reactors
M. Natov, V. Mitova, and S. Vassileva **871**
Published online 11 February 2004

Preparation and Release Behavior of Carboxymethylated Chitosan/Alginate Microspheres Encapsulating Bovine Serum Albumin
L. Zhang, J. Guo, X. Peng, and Y. Jin **878**
Published online 11 February 2004

Incorporation of Carbon Dioxide into Soybean Oil and Subsequent Preparation and Studies of Nonisocyanate Polyurethane Networks
B. Tamami, S. Sohn, and G. L. Wilkes **883**
Published online 11 February 2004

Study on Curing Kinetics and Curing Mechanism of Epoxy Resin Based on Diglycidyl Ether of Bisphenol A and Melamine Phosphate
W.-Y. Chen, Y.-Z. Wang, and F.-C. Chang **892**
Published online 11 February 2004

Active Control on Molecular Conformations and Tensile Properties of Spider Silk
Z. J. Pan, C. P. Li, and Q. Xu **901**
Published online 11 February 2004

The Tribological Behavior of Micrometer and Nanometer TiO_2 Particle-Filled Poly(phthalazine ether sulfone ketone) Composites
X. Shao, W. Liu, and Q. Xue **906**
Published online 11 February 2004

Electrical Behavior of Chitosan and Poly(hydroxyethyl methacrylate) Hydrogel in the Contact System
S. J. Kim, H. I. Kim, S. R. Shin, and S. I. Kim **915**
Published online 11 February 2004

Sorption Studies of Volatile Organic Compounds in a Divinyl-Terminated Poly(dimethylsiloxane)–Oligo Polymer
H. Zhen, S. Jang, and W. K. Teo **920**
Published online 17 February 2004

Thermoplastic Olefin/Clay Nanocomposites: Morphology and Mechanical Properties
S. Mehta, F. M. Mirabella, K. Rufener, and A. Bafna **928**
Published online 17 February 2004

Preparation and Characterization of Hybrid Organic–Inorganic Epoxide-Based Films and Coatings Prepared by the Sol–Gel Process
M. Špírková, J. Brus, D. Hlavatá, H. Kamišová, L. Matějka, and A. Strachota **937**
Published online 17 February 2004

Microwave-Promoted Rapid Synthesis of New Optically Active Poly(amide imide)s Derived from *N,N'*-(Pyromellitoyl)-bis-L-isoleucine Diacid Chloride and Aromatic Diamines
S. Mallakpour and M. H. Shahmohammadi **951**
Published online 17 February 2004

Viscosity-Reducing Effects of Two Semiflexible Liquid-Crystalline Polyesters with Different Chain Rigidities in a Matrix of Polycarbonate
W. Zhao, J. Zhao, Y. Chen, J. Wei Xu, and X. Lu **960**
Published online 17 February 2004

Isothermal Crystallization Kinetics of Polypropylene by Differential Scanning Calorimetry. I. Experimental Conditions
F. Hernández-Sánchez, L. F. del Castillo, and R. Vera-Graziano **970**
Published online 17 February 2004

Properties of Amine-Containing Coatings Prepared by Plasma Polymerization
A. Choukourov, H. Biederman, I. Kholodkov, D. Slavinska, M. Trchova, and A. Hollander **979**
Published online 17 February 2004

Experimental and Simulation Studies on Molecular Transport of Substituted Monocyclic Aromatic Liquids into Fluoropolymer Sheet Membranes: Liquid Structure–Diffusion, –Sorption, and –Permeation Relationships
T. M. Aminabhavi and B. V. Kumar Naidu **991**
Published online 17 February 2004

Water-Swelling Behavior of Hydrophobic Porous Copolymer Resins Composed of Two Kinds of Crosslinkers
X. Zhao, X. Wang, and J. Yan **997**
Published online 17 February 2004

Permselectivity of Polyamide Composite Membrane Modified by Solvent
B.-X. Cai **1005**
Published online 17 February 2004

Effect of Process Variables on Bulk Development of Air-Textured Poly(trimethylene terephthalate) Bulk Continuous Filaments
H. H. Chuah **1011**
Published online 17 February 2004

A Novel Dendritic Acrylate Oligomer: Synthesis and UV Curable Properties
D.-M. Xu, K.-D. Zhang, and X.-L. Zhu **1018**
Published online 17 February 2004

Cure Characteristics and Mechanical Properties of Short Nylon Fiber-Reinforced Nitrile Rubber Composites
C. Rajesh, G. Unnikrishnan, E. Purushothaman, and S. Thomas **1023**
Published online 17 February 2004

Polymerization in a Magnetic Field. 14. Possibilities to Improve Field Effect during methyl acrylate Polymerization
A. P. Chiriac **1031**
Published online 17 February 2004

Effect of Rare Earth Elements Surface Treatment on Tensile Properties of Aramid Fiber-Reinforced Epoxy Composites
X.-H. Cheng, J. Wu, and C.-Y. Xie **1037**
Published online 17 February 2004

Synthesis and Characterization of Novel Hydrophobically Modified Polybetaines as Pour Point Depressants
A. G. Didukh, R. B. Koizhaiganova, L. A. Bimendina, and S. E. Kudaibergenov **1042**
Published online 17 February 2004

Effects of High-Energy Electron Beam on Low-Density Polyethylene Materials Containing EVA
S. M. A. Salehi, G. Mirjalili, and J. Amrollahi **1049**
Published online 17 February 2004

Preparation and Characterization of Highly Oriented Poly(γ-benzyl L-glutamate) Networks and Gels with Long Channels with Micrometer-Scale Diameters
Y. Yamane, M. Kanekiyo, S. Koizumi, C. Zhao, S. Kuroki, and I. Ando **1053**
Published online 17 February 2004

Melt-Intercalation Nanocomposites with Fluorinated Polymers and a Correlation for Nanocomposite Formation
Y. Kim and J. L. White **1061**
Published online 18 February 2004

Preparation and Properties of (BATB–ODPA) Polyimide–Clay Nanocomposite Materials
J.-M. Yeh, C.-L. Chen, T.-H. Kuo, W.-F. Su, H.-Y. Huang, D.-J. Liaw, H.-Y. Lu, C.-F. Liu, and Y.-H. Yu **1072**
Published online 18 February 2004

Studies on Indian Silk. I. Macrocharacterization and Analysis of Amino Acid Composition
K. Sen and M. Babu K **1080**
Published online 18 February 2004

Studies on Indian Silk. II. Structure–Property Correlations
K. Sen and M. Babu K **1098**
Published online 18 February 2004

Studies on Indian Silk. III. Effect of Structure on Dyeing Behavior
K. Sen and M. Babu K **1116**
Published online 18 February 2004

Cure Kinetics, Microheterogeneity, and Mechanical Properties of the High-Temperature Cure of Vinyl Ester Resins
P. Li, X. Yang, Y. Yu, and D. Yu **1124**
Published online 18 February 2004

Synthesis and Characterization of Functional Copolymer of Linalool and Vinyl Acetate: A Kinetic Study
A. Shukla and A. K. Srivastava **1134**
Published online 18 February 2004

Synthesis and Properties of Fluoroalkyl End-Capped Sulfobetaine Polymers
H. Sawada, M. Umedo, T. Kawase, M. Baba, and T. Tomita **1144**
Published online 18 February 2004

Photopolymerization of Acrylates in the Presence of Phenolic Derivatives: Role of the Photoinitiating System
M. Dossot, H. Obeid, X. Allonas, P. Jacques, J. P. Fouassier, and A. Merlin **1154**
Published online 18 February 2004

Visualization of Poly(ether imide) and Polycarbonate Blending in an Internal Mixer
B. Lin and U. Sundararaj **1165**
Published online 18 February 2004

Development and Characterization of Hydrocarbon Polyol Polyurethane and Silicone Magnetorheological Polymeric Gels
A. Fuchs, M. Xin, F. Gordaninejad, X. Wang, G. H. Hitchcock, H. Gecol, C. Evrensel, and G. Korol **1176**
Published online 18 February 2004

Novel Aliphatic Polyketone Fiber by a Wet-Spinning Method Using Aqueous Composite Metal Salt Solutions
T. Morita, R. Taniguchi, T. Matsuo, and J. Kato **1183**
Published online 18 February 2004

Modification of a Two-Component System by Introducing an Epoxy-Reactive Diluent: Construction of a Time–Temperature–Transformation (TTT) Diagram
L. Núñez, M. Villanueva, M. R. Núñez, B. Rial, and L. Fraga **1190**
Published online 18 February 2004

Influence of an Epoxy Reactive Diluent on the Thermal Degradation Process of the System DGEBA *n* = 0/1,2 DCH
L. Núñez, M. Villanueva, M. R. Núñez, and B. Rial **1199**
Published online 18 February 2004

Morphology and Micromechanical Deformation Behavior of Styrene–Butadiene Block Copolymers. III. Binary Blends of Asymmetric Star Block Copolymer with General-Purpose Polystyrene
R. Adhikari, G. H. Michler, S. Goerlitz, and K. Knoll **1208**
Published online 18 February 2004

Morphology and Micromechanical Deformation Behavior of Styrene–Butadiene Block Copolymers. IV. Structure–Property Correlation in Binary Block Copolymer Blends
R. Adhikari, G. H. Michler, S. Henning, R. Godehardt, T. A. Huy, S. Goerlitz, and K. Knoll **1219**
Published online 18 February 2004

Effect of Bis(diisopropyl)thiophosphoryl Disulfide on the Covulcanization of Styrene–Butadiene Rubber and Ethylene–Propylene–Diene (Monomer) Blends
A. K. Ghosh, A. Das, and D. K. Basu **1231**
Published online 18 February 2004

Analysis of Surface Structure with Regard to Interfacial Delamination in Polyester Films with Incompatible Polymers
K. Ito, C. Nonomura, K. Yamashita, T. Suzuki, C. Chinwanitcharoen, T. Yamada, and H. Ishihara **1243**
Published online 19 February 2004

Mechanical and Dielectric Properties of Cured 1,2-Bis(vinylphenyl)ethane Resin Modified with Poly(phenylene oxide)
S. Amou, S. Yamada, A. Takahashi, A. Nagai, and M. Tomoi **1252**
Published online 19 February 2004

Preparation of Hyperbranched Polyester Photoresists for Miniaturized Optics
Z. Feng, M. Liu, Y. Wang, and L. Zhao **1259**
Published online 19 February 2004

Solid Polymer Electrolytes. VII. Preparation and Ionic Conductivity of Gelled Polymer Electrolytes Based on Poly(ethylene glycol) Diglycidyl Ether Cured with α,ω-Diamino Poly(propylene oxide)
W.-J. Liang, T.-Y. Chen, and P.-L. Kuo **1264**
Published online 19 February 2004

Effect of the Nature and Degree of Crosslinking on the Catalase-Like Activity of Polystyrene-Supported Schiff Base-Metal Complexes
G. S. Vinod Kumar and B. Mathew **1271**
Published online 19 February 2004

Rheological Investigation on the Interaction of a Fluorocarbon and Hydrocarbon Comodified PAA with a Nonionic Surfactant in the Presence of Salt
D. Zhuang, T. E. Hogen-Esch, and Y. Zhang **1279**
Published online 19 February 2004

Modified Polypropylene Wood Flour Composites. II. Fracture, Deformation, and Mechanical Properties
V. N. Hristov, M. Krumova, S. Vasileva, and G. H. Michler **1286**
Published online 19 February 2004

Polyethylene Catalytic Hydrocracking by PtHZSM-5, PtHY, and PtHMCM-41
N. D. Hesse and R. L. White **1293**
Published online 19 February 2004

DMC Catalyzed Epoxide Polymerization: Induction Period, Kinetics, and Mechanism
L.-C. Wu, A.-F. Yu, M. Zhang, B.-H. Liu, and L.-B. Chen **1302**
Published online 19 February 2004

An Investigation of Cadmium(II) and Nickel(II) Adsorption by Chitin Graft Copolymer
J. A. R. Filho, E. E. Bach, R. R. Vargas, D. A .W. Soares, and A. A. A. de Queiroz **1310**
Published online 19 February 2004

Mechanical, Hygroscopic, and Thermal Properties of Metal Particle and Metal Evaporated Tapes and Their Individual Layers
B. Bhushan and Z. Tao **1319**
Published online 19 February 2004

Effect of Working Conditions on the Morphology of Electrosynthesized Polyfuran
M. A. del Valle, L. Ugalde, F. R. Díaz, M. E. Bodini, and J. C. Bernède **1346**
Published online 19 February 2004

Water Diffusion in a Soft Contact Lens Polymer and Its Tolerance to UV Radiation Studied by Positron Lifetime Technique
M. C. Thimmegowda, H. B. Ravi Kumar, and C. Ranganathaiah **1355**
Published online 19 February 2004

Bulk Conductive Polymers Prepared from Nylon-6/6,9 Copolymer/$CuCl_2$ Compounds
W. Jia, R. Tchoudakov, M. Narkis, and A. Siegmann **1367**
Published online 19 February 2004

ERRATUM
Immobilization of Glucose Oxidase onto Electrochemically Prepared Poly(aniline-*co*-fluoroaniline) Films
A. L. Sharma, R. Singhal, A. Kumar, Rajesh, K. K. Pande, and B. D. Malhotra **1374**
Published online 19 February 2004

ISSUE NUMBER 3 / MARCH 15, 2004

One-Pot Synthesis of Polymeric Bead Bearing Surface Charge
B. Kusuktham and K. Srikulkit **1375**
Published online 26 February 2004

Studies of Polypropylene–Intumescent Flame-Retardant Composites Based on Etched Polypropylene as a Coupling Agent
Z.-L. Ma, J.-G. Gao, and L.-G. Bai **1388**
Published online 26 February 2004

Thermal Oxidation of Self-Degradable Composite Films Based on Low-Density Polyethylene
A. A. Ol'khov, L. S. Shibryaeva, A. L. Lordanskii, and G. E. Zaikov **1392**
Published online 26 February 2004

Bulk Polymerization of Styrene in the Presence of Polybutadiene: Effect of Initiator Type and Prepolymerization Conditions on Particle Morphology
G. Soto, E. Nava, M. Rosas, M. Fuenmayor, I. M. González, G. R. Meira, and H. M. Oliva **1397**
Published online 26 February 2004

Polyester Binders for Wood Containing Benzotriazole and HALS Light Stabilizers
P. Sundell and F. Sundholm **1413**
Published online 26 February 2004

Reduced Copper Diffusion in Layered Silicate/Fluorinated Polyimide (6FDA-ODA) Nanocomposites
L.-Y. Jiang and K.-H. Wei **1422**
Published online 26 February 2004

Rheological Properties of Water Solutions of Syndiotactic Poly(vinyl alcohol) of Different Molecular Weights
S. S. Kim, I. S. Seo, J. H. Yeum, B. C. Ji, J. H. Kim, J. W. Kwak, W. S. Yoon, S. K. Noh, and W. S. Lyoo **1426**
Published online 26 February 2004

Design of Organic Electroluminescent Displays with Ultraviolet-Shielding Filters
R. H. Lee, C. Y. Huang, and C.-T. Chen **1432**
Published online 26 February 2004

Dynamically Cured Polypropylene/Epoxy Blends
X. Jiang, H. Huang, Y. Zhang, and Y. Zhang **1437**
Published online 26 February 2004

Nylon 6 Microfiber Prepared by Carbon Dioxide Laser Heating
A. Suzuki and K. Kamata **1449**
Published online 26 February 2004

Nylon 6 Microfiber Obtained by a Continuous-Thinning Method with a Carbon Dioxide Laser
A. Suzuki and K. Kamata **1454**
Published online 26 February 2004

Hyperbranched Conjugated Polymers for Photovoltaic Applications
J. Qiao, C. Yang, Q. He, F. Bai, and Y. Li **1459**
Published online 26 February 2004

Characterization of the Water State of Hyaluronic Acid and Poly(vinyl alcohol) Interpenetrating Polymer Networks
S. J. Kim, C. K. Lee, and S. I. Kim **1467**
Published online 26 February 2004

Electrostimulus Responsive Behavior of Poly(acrylic acid)/Polyacrylonitrile Semi-Interpenetrating Polymer Network Hydrogels
S. J. Kim, K. J. Lee, and S. I. Kim **1473**
Published online 26 February 2004

Preparation of Novel Semihomogeneous Cation-Permeable Membranes from Blends of Sulfonated Poly(phenylene sulfide) and Sulfonated Phenolphthalein Poly(ether ether ketone)
K. Hu, T. Xu, Y. Fu, and W. Yang **1478**
Published online 26 February 2004

Surface Modification of Silicone Rubber with Poly(ethylene glycol) Hydrogel Coatings
T. Vladkova **1486**
Published online 27 February 2004

Study on the Mechanical Properties of Hybrid Reinforced Rigid Polyurethane Composite Foam
Z.-G. Yang, B. Zhao, S.-L. Qin, Z.-F. Hu, Z.-K. Jin, and J.-H. Wang **1493**
Published online 27 February 2004

Synthesis of Functionalized Phenolformaldehyde Polymer Resins by the Reaction of 2,4-Dihydroxyacetophenone Formaldehyde Resin with Various Amines and Their Metal Ion Uptake Properties
A. R. Reddy and K. H. Reddy **1501**
Published online 27 February 2004

Sorbents for Removal Surfactants from Aqueous Solutions: Surface Modification of Natural Solids to Enhance Sorption Ability
J. Łukaszczyk, E. Łękawska, K. Lunkwitz, and G. Petzold **1510**
Published online 27 February 2004

Synthesis of New Soluble Aromatic Poly(amide imide)s from Unsymmetrical Extended Diamine Containing Phthalazinone Moiety
L. Cheng and X. G. Jian **1516**
Published online 27 February 2004

Processing Thermal Stability and Degradation Kinetics of Poly(vinyl Chloride)/Montmorillonite Composites
C. Wan, G. Tian, N. Cui, Y. Zhang, and Y. Zhang **1521**
Published online 27 February 2004

Studies on γ-Fe_2O_3–High-Density Polyethylene Composites and Their Additives
B. Govindaraj, N. V. Sastry, and A. Venkataraman **1527**
Published online 27 February 2004

Isotactic Polypropylene Microfiber Prepared by Carbon Dioxide Laser-Heating
A. Suzuki and S. Narusue **1534**
Published online 27 February 2004

Synthesis and Characterization of Spinning Poly(acrylonitrile-*co*-silk fibroin peptide)s
Z. Chen, M. Suzuki, M. Kimura, Y. Kondo, K. Hanabusa, and H. Shirai **1540**
Published online 27 February 2004

Rod-Climbing Characteristics of α-Fe_2O_3 Suspended Polyisobutylene/Polybutene Solution
S. T. Lim, H. J. Choi, and M. S. Jhon **1548**
Published online 27 February 2004

Novel Model for Uniaxial Strain-Rate–Dependent Stress–Strain Behavior of Ethylene–Propylene–Diene Monomer Rubber in Compression or Tension
B. Song, W. Chen, and M. Cheng **1553**
Published online 27 February 2004

Partially Miscible Blends Based on a Polyarylate and Poly(trimethylene terephthalate)
G. Guerrica-Echevarria, J. I. Eguiazábal, and J. Nazábal **1559**
Published online 27 February 2004

Study of the Miscibility and Crystallization Behavior of Poly(ethylene oxide)/Poly(vinyl alcohol) Blends
W.-C. Lai and W.-B. Liau **1562**
Published online 27 February 2004

Grafting of Polyacrylonitrile onto Guar Gum Under Microwave Irradiation
V. Singh, A. Tiwari, D. N. Tripathi, and R. Sanghi **1569**
Published online 27 February 2004

Selection of a Precursor of a Monofunctional Polyhedral Oligomeric Silsesquioxane Reacted with Aromatic Diamines
C. Ramírez, J. M. L. Vilariño, M. J. Abad, L. Barral, R. Bouza, J. Cano, F. J. Díez, S. García-Garabal, and J. López **1576**
Published online 27 February 2004

Studies of Adsorption Properties of Crosslinked Chitosan for Vanadium(V), Tungsten(VI)
S. Qian, H. Wang, G. Huang, S. Mo, and W. Wei **1584**
Published online 1 March 2004

Surface Grafting of Polyacrylamide from Polyethylene-Based Copolymer Film
N. Luo, S. M. Husson, D. E. Hirt, and D. W. Schwark **1589**
Published online 1 March 2004

Studies on Poly(acrylic acid)/Attapulgite Superabsorbent Composite. I. Synthesis and Characterization
A. Li, A. Wang, and J. Chen **1596**
Published online 1 March 2004

Processing and Chemorheology of Epoxy Resins and Their Blends with Dendritic Hyperbranched Polymers
D. Ratna, R. Varley, and G. P. Simon **1604**
Published online 1 March 2004

Preparation of Positive-Temperature Coefficient Heaters Using Platinum-Catalyzed Silicone Rubber
E.-S. Park, S.-J. Yun, G.-T. Kim, I.-J. Park, W.-H. Choi, J.-W. Jeong, S.-Y. Hong, H.-W. Park, L. W. Jang, and J.-S. Yoon **1611**
Published online 1 March 2004

Synthesis of Superabsorbent Resin by Ultraviolet Photopolymerization
W. Ruan, J. Qiao, Y. Huang, and A. Niu **1618**
Published online 1 March 2004

Preparation and Properties of Hydrophilic–Hydrophobic Chitosan Derivatives
H. Yang, S. Zhou, and X. Deng **1625**
Published online 1 March 2004

Pseudo-First-Order Kinetic Studies of the Sorption of Acid Dyes onto Chitosan
Y. C. Wong, Y. S. Szeto, W. H. Cheung, and G. McKay **1633**
Published online 1 March 2004

Syntheses and Adsorption Properties for Hg^{2+} of Chelating Resin of Crosslinked Polystyrene-Supported 2,5-Dimercapto-1,3,4-thiodiazole
R. Qu, C. Wang, C. Sun, C. Ji, G. Cheng, X. Wang, and G. Xu **1646**
Published online 1 March 2004

Thermal Mechanical and Dynamic Mechanical Property of Biphenyl Polyimide Fibers
Q.-H. Zhang, W.-Q. Luo, L.-X. Gao, D.-J. Chen, and M.-X. Ding **1653**
Published online 1 March 2004

Use of Pyrolysed Oil Shale as Filler in Poly(ethylene-co-vinyl Alcohol)
R. V. Barbosa, R. Baumhardt-Neto, R. S. Mauler, C. José, P. Gorga, and C. G. Schneider **1658**
Published online 1 March 2004

Effect of Molecular Weight on Brittle-to-Ductile Transition Temperature of Polyetherimide
M. A. Sanner, G. Haralur, and A. May **1666**
Published online 1 March 2004

Modification of Polystyrene by Reactive Extrusion with Peroxide and Trimethylolpropane Triacrylate
B. K. Kim, K. H. Shon, and H. M. Jeong **1672**
Published online 1 March 2004

Crystallization and Melting Behavior of 1,2-Syndiotactic Polybutadiene
F. Bertini, M. Canetti, and G. Ricci **1680**
Published online 1 March 2004

Surface Modification of Ethylene-*co*-Acrylic Acid Copolymer Films: Addition of Amide Groups by Covalently Bonded Amino Acid Intermediates
N. Luo, M. J. Stewart, D. E. Hirt, S. M. Husson, and D. W. Schwark **1688**
Published online 1 March 2004

Preparation of Silane-Terminated Polystyrene and Polymethylmethacrylate Self-Assembled Films on Silicon Wafer
F. Zhou, W. Liu, T. Xu, S. Liu, M. Chen, and J. Liu **1695**
Published online 1 March 2004

Structure and Properties of Polyamide 6 Blends with Low-Density Polyethylene Grafted by Itaconic Acid and with Neutralized Carboxyl Groups
S. S. Pesetskii, Y. M. Krivoguz, and B. Jurkowski **1702**
Published online 1 March 2004

Preparation and Characterization of Sulfonated Polyetherimide/Polyetherimide Blend Membranes
L.-Q. Shen, Z.-K. Xu, Q. Yang, H.-L. Sun, S.-Y. Wang, and Y.-Y. Xu **1709**
Published online 1 March 2004

Preparation and Characterization of Starch/Polycaprolactone Blend
D.-K. Kweon, N. Kawasaki, A. Nakayama, and S. Aiba **1716**
Published online 1 March 2004

Surface Hydrolysis of Filaments Based on Poly(trimethylene terephthalate) Spun at High Spinning Speeds
R. Kotek, D.-W. Jung, J. H. Kim, B. Smith, P. Guzman, and B. Schmidt **1724**
Published online 1 March 2004

Electrical/pH Responsive Properties of Poly(2-acrylamido-2-methylpropane Sulfonic Acid)/Hyaluronic Acid Hydrogels
S. J. Kim, C. K. Lee, and S. I. Kim **1731**
Published online 2 March 2004

Thermal and Thermooxidative Degradation of Engineering Thermoplastics and Life Estimation
Y. N. Gupta, A. Chakraborty, G. D. Pandey, and D. K. Setua **1737**
Published online 2 March 2004

***In Situ* Polymerization of Titanium Isopropoxide in Polycaprolactone: Properties and Characterization of the Hybrid Nanocomposites**
C.-S. Wu **1749**
Published online 2 March 2004

A Governing Equation for Physical Aging of Thick and Thin Fluoropolyimide Films
C. Zhou, T.-S. Chung, R. Wang, and S. H. Goh **1758**
Published online 2 March 2004

Study on the Macrokinetics of Poly(Trimethylene Terephthalate) Polycondensation Reaction
K. Chen, X. Tang, S. Chen, and G. Fu **1765**
Published online 2 March 2004

Interfacial Effects in Polypropylene–Silica Nanocomposites
M. Z. Rong, M. Q. Zhang, S. L. Pan, and K. Friedrich **1771**
Published online 2 March 2004

Morphological Study of Poly(vinylidene Fluoride) Asymmetric Membranes: Effects of the Solvent, Additive, and Dope Temperature
M. L. Yeow, Y. T. Liu, and K. Li **1782**
Published online 2 March 2004

Effect of Water on the Oxygen Barrier Properties of Poly(ethylene terephthalate) and Polylactide Films
R. Auras, B. Harte, and S. Selke **1790**
Published online 2 March 2004

Water-Swelling Elastomer Prepared by *In Situ* Formed Lithium Acrylate in Chlorinated Polyethylene
W. Ren, Z. Peng, Y. Zhang, and Y. Zhang **1804**
Published online 2 March 2004

Effect of Surfactant Systems on the Water Sensitivity of Latex Films
L. N. Butler, C. M. Fellows, and R. G. Gilbert **1813**
Published online 2 March 2004

Homopolymerization and Copolymerization of *tert*-Butyl Methacrylate and Norbornene with Nickel-Based Methylaluminoxane Catalysts
C.-F. Huang, S.-K. Wang, S.-W. Kuo, W.-J. Huang, and F.-C. Chang **1824**
Published online 3 March 2004

The Role of Additives in the Manufacture of Sheets of Unsaturated Polyester and Postconsumer Unsaturated Polyester/Glass Fiber Composites: Mechanical and Dynamic Mechanical Properties
A. G. Pedroso, D. S. Rosa, and T. D. Z. Atvars **1834**
Published online 3 March 2004

Synthesis and Degradation Behavior of Poly(Propylene Carbonate) Derived from Carbon Dioxide and Propylene Oxide
L. C. Du, Y. Z. Meng, S. J. Wang, and S. C. Tjong **1840**
Published online 3 March 2004

^{1}H- and ^{13}C-NMR Analyses of Aqueous Polyamideamine–Epichlorohydrin Resin Solutions
T. Obokata and A. Isogai **1847**
Published online 3 March 2004

Friction and Wear Studies on Nylon-6/SiO_2 Nanocomposites
M. García, M. de Rooij, L. Winnubst, W. E. van Zyl, and H. Verweij **1855**
Published online 3 March 2004

Synthesis and Chain Extension of Nitroxide-Terminated Styrene–Maleimide Copolymers
J. Lokaj, I. Krakovský, P. Holler, and L. Hanyková **1863**
Published online 3 March 2004

Properties of a Few Aromatic Poly(thioether ketones) as Sulfur-Containing High-Performance Polymers
S. Matsumura, N. Kihara, and T. Takata **1869**
Published online 3 March 2004

Modeling of Polyurethane Foam Formation
R. Tesser, M. Di Serio, A. Sclafani, and E. Santacesaria **1875**
Published online 3 March 2004

Comparison Between Titanium Tetrabutoxide and a New Commercial Titanium Dioxide Based Catalyst Used for the Synthesis of Poly(Ethylene Terephthalate)
L. Finelli, C. Lorenzetti, M. Messori, L. Sisti, and M. Vannini **1887**
Published online 3 March 2004

Pectin and Polyacrylamide Composite Hydrogels: Effect of Pectin on Structural and Dynamic Mechanical Properties
L. Liu, P. H. Cooke, D. R. Coffin, M. L. Fishman, and K. B. Hicks **1893**
Published online 3 March 2004

Synthesis and Characterization of Statistical Copolymers of Styrene and 4-(1-hydroxyalkyl)Styrene
J. M. Nasrullah and R. Dhamodharan **1902**
Published online 4 March 2004

Effect of Degree of Polymerization on Gelation and Flow Processability of Poly(vinyl chloride)
M. Fujiyama and M. Kondou **1915**
Published online 4 March 2004

Electrochemical Polymerization of β-Naphthalene Sulfonic Acid
E. Li, Z. Huang, G. Shi, L. Qu, and J. Zhang **1939**
Published online 4 March 2004

Gas Phase Polymerization of 1,3-Butadiene with Supported Neodymium-Based Catalyst: Investigation of Molecular Weight
X. Ni, J. Li, Y. Zhang, and Z. Shen **1945**
Published online 4 March 2004

Preparation and Performance of Aluminum Borate Whisker–Reinforced Epoxy Composites. I. Effect of Whiskers on Processing, Reactivity, and Mechanical Properties
G. Liang and X. Hu **1950**
Published online 4 March 2004

Polymerization Kinetics and Thermal Properties of Dicyanate/Clay Nanocomposites
D. S. Kim and K. M. Lee **1955**
Published online 4 March 2004

Miniemulsion Polymerization of Styrene with Polymeric Costabilizers
C.-S. Chern and C.-H. Lin **1961**
Published online 4 March 2004

Effective Enhancement of Anticorrosive Properties of Polystyrene by Polystyrene–Clay Nanocomposite Materials
J.-M. Yeh, S.-J. Liou, C.-G. Lin, Y.-P. Chang, Y.-H. Yu, and C.-F. Cheng **1970**
Published online 4 March 2004

***In Situ* Atomic Oxygen Erosion Study of Fluoropolymer Films Using X-ray Photoelectron Spectroscopy**
R. I. Gonzalez, S. H. Phillips, and G. B. Hoflund **1977**
Published online 4 March 2004

Raman Spectroscopic Study of CdS, PVA Composite Films
Y. A. Badr, K. M. Abd El-Kader, and R. M. Khafagy **1984**
Published online 4 March 2004

Preparation and Evaluation of Chitosan-Coated Polyphosphazene Hydrogel Beads for Drug Controlled Release
L. Qiu **1993**
Published online 8 March 2004

Silica-Reinforced Dynamically Vulcanized Ethylene–Propylene–Diene Monomer/Polypropylene Thermoplastic Elastomers: Morphology, Rheology, and Dynamic Mechanical Properties
S. Bazgir, A. A. Katbab, and H. Nazockdast **2000**
Published online 8 March 2004

Effect of Supercritical Carbon Dioxide Dyeing Conditions on the Chemical and Morphological Changes of Poly(ethylene terephthalate) Fibers
A. Hou, K. Xie, and J. Dai **2008**
Published online 8 March 2004

Preparation of Silicon Dioxide/Polyurethane Nanocomposites by a Sol–Gel Process
Y. Zhu and D.-x. Sun **2013**
Published online 8 March 2004

Fundamental Study of the Effect of the Fiber Wall Thickness and Inner Diameter on the Structure of Polyamide and Polypropylene Hollow Fibers
D. Petrulis **2017**
Published online 8 March 2004

Supercritical CO_2 Assisted Processing of Polystyrene/Nylon 1212 Blends and CO_2-Induced Epitaxy on Nylon 1212
Y. Chang, Q. Xu, B. Han, Y. Wang, M. Liu, and Q. Zhao **2023**
Published online 8 March 2004

Synthesis and Characterization of PolyAcrylamideGrafted Sodium Alginate Membranes for Pervaporation Separation of Water + Isopropanol Mixtures
U. S. Toti and T. M. Aminabhavi **2030**
Published online 8 March 2004

Preparation and Properties of Unsaturated Polyester–Montmorillonite Intercalated Hybrid
Y. Zhang, Q. Cai, Z. Jiang, and K. Gong **2038**
Published online 8 March 2004

Synthesis and Characterization of Polyurethane Foam Matrices for the Support of Granular Adsorbent Materials
M. L. Pinto, J. Pires, A. P. Carvalho, J. C. M. Bordado, and M. B. de Carvalho **2045**
Published online 8 March 2004

Fiber Formation and Physical Properties of Chitosan Fiber Crosslinked by Epichlorohydrin in a Wet Spinning System: The Effect of the Concentration of the Crosslinking Agent Epichlorohydrin
S.-H. Lee, S.-Y. Park, and J.-H. Choi **2054**
Published online 8 March 2004

ISSUE NUMBER 4 / MAY 15, 2004

Natural Rubber–Isotactic Polypropylene Thermoplastic Blends
S. Varghese, R. Alex, and B. Kuriakose **2063**
Published online 8 March 2004

Hydrophobic Properties of Ethylene–Vinyl Alcohol Copolymer Treated with Plasma Source Ion Implantation
K. Kim, W. Sung, H. Park, Y. Lee, S. Han, and W. Kim **2069**
Published online 8 March 2004

Ion-Conducting Polymer Gels of Polyacrylamide Embedded with K_2CO_3
W. Song, Y. Wang, and H. Deng **2076**
Published online 8 March 2004

Preparation of Porous Poly(D,L-lactide) and Poly(D,L-lactide-*co*-glycolide) Membranes by a Phase Inversion Process and Investigation of Their Morphological Changes as Cell Culture Scaffolds
S. Y. Kim, T. Kanamori, Y. Noumi, P.-C. Wang, and T. Shinbo **2082**
Published online 8 March 2004

A Phosphorus-Containing Diamine for Flame-Retardant, High-Functionality Epoxy Resins. I. Synthesis, Reactivity, and Thermal Degradation Properties
W. Liu, R. J. Varley, and G. P. Simon **2093**
Published online 8 March 2004

Nanocomposites of Poly(methyl methacrylate) and Organically Modified Layered Silicates by Melt Intercalation
Z. Shen, G. P. Simon, and Y.-B. Cheng **2101**
Published online 8 March 2004

Concanavalin A Attached Poly(*p*-chloromethylstyrene) Beads for Glycoenzyme Separation
T. Bahar and A. Tuncel **2116**
Published online 8 March 2004

Preparation and Thermal Analysis of Cotton–Clay Nanocomposites
L. A. White **2125**
Published online 8 March 2004

Alkali–Methanol–Anthraquinone Pulping of *Miscanthus x giganteus* for Thermoplastic Composite Reinforcement
L. Lundquist, G. Arpin, Y. Leterrier, F. Berthold, M. Lindström, and J. E. Månson **2132**
Published online 8 March 2004

Synthesis and Material Properties of Syndiotactic Polystyrene/Organophilic Clay Nanocomposites
M. H. Kim, C. I. Park, W. M. Choi, J. W. Lee, J. G. Lim, O O. Park, and J. M. Kim **2144**
Published online 8 March 2004

^{13}C-NMR Study of *Dipteryx Alata Vogel* Starch
M. I. B. Tavares, A. L. B. S. Bathista, E. O. Silva, P. M. Costa, N. P. Filho, and J. S. Nogueira **2151**
Published online 8 March 2004

Structural Characterization of Reactor Blends of Polypropylene and Ethylene-Propylene Rubber
M. Pires, R. S. Mauler, and S. A. Liberman **2155**
Published online 8 March 2004

Studies on the Synthesis and Thermal Properties of Copoly(L-lactic acid/glycolic acid) by Direct Melt Polycondensation
P. Lan, Y. Zhang, Q. Gao, H. Shao, and X. Hu **2163**
Published online 8 March 2004

Analysis of Failure of Crosslinked Polyethylene Cables Because of Electrical Treeing: A Physicochemical Approach
R. Sarathi, S. Das, C. R. Anil Kumar, and R. Velmurugan **2169**
Published online 8 March 2004

Effect of Some Service Conditions on the Electrical Resistivity of Conductive Styrene–Butadiene Rubber–Carbon Black Composites
G. T. Mohanraj, T. K. Chaki, A. Chakraborty, and D. Khastgir **2179**
Published online 8 March 2004

Atom-Transfer Radical Polymerization of Methyl Methacrylate with α,α'-Dichloroxylene/CuCl/*N,N,N′,N″,N″*-Pentamethyldiethylenetriamine Initiation System Under Microwave Irradiation
X. Li, X. Zhu, Z. Cheng, W. Xu, and G. Chen **2189**
Published online 8 March 2004

Spectroscopic Study of the Modification of Cellulose with Polyethylenimines
M. U. de la Orden, M. C. Matías, and J. M. Urreaga **2196**
Published online 8 March 2004

Free-Radical Grafting of Acrylic Acid onto Isotactic Polypropylene Using Styrene as a Comonomer in Supercritical Carbon Dioxide
Q. Dong and Y. Liu **2203**
Published online 8 March 2004

Preparation and Properties of Elastic Polyimide-Silica Composites using Silanol Sol from Water Glass
S.-i. Inoue, K. Morita, K. Asai, and H. Okamoto **2211**
Published online 8 March 2004

Rheological, Electrical, and Microwave Properties of Polymers with Nanosized Carbon Particles
R. Kotsilkova, D. Nesheva, I. Nedkov, E. Krusteva, and S. Stavrev **2220**
Published online 8 March 2004

Material Characterization of a High-Dielectric-Constant Polymer–Ceramic Composite for Embedded Capacitor for RF Applications
Y. Rao and C. P. Wong **2228**
Published online 9 March 2004

Amphibious Water-Soluble Copolymer. I. Its Synthesis and Dispersing Ability on Barium Titanate
L.-P. Chen, K.-L. Ying, and K.-C. Hsu **2232**
Published online 9 March 2004

Ketone Derivatives of Diels-Alder Adducts of Levopimaric Acid with Acrylic Acid and Maleic Anhydride: Synthesis, Characterization, and Polymerization
I. Bicu and F. Mustata **2240**
Published online 9 March 2004

Reduction of Offensive Odor from Natural Rubber by Odor-Reducing Substances
V. P. Hoven, K. Rattanakarun, and Y. Tanaka **2253**
Published online 9 March 2004

Effects of Water on the Curing and Properties of Epoxy Adhesive Used for Bonding FRP Composite Sheet to Concrete
L. Wu, S. V. Hoa, and M.-T. Ton-That **2261**
Published online 9 March 2004

Enhancement of Corrosion Protection Effect of Poly(styrene-*co*-acrylonitrile) by the Incorporation of Nanolayers of Montmorillonite Clay into Copolymer Matrix
J.-M. Yeh, S.-J. Liou, H.-J. Lu, and H.-Y. Huang **2269**
Published online 9 March 2004

Synthetic, Structural, and Thermal Degradation of a Tercopolymer Derived from Salicylic Acid, Guanidine, and Formaldehyde
P. E. P. Michael, P. S. Lingala, H. D. Juneja, and L. J. Paliwal **2278**
Published online 9 March 2004

Pervaporation of 1,2-Dimethoxyethane from Aqueous Solutions by Crosslinked Oligosilylstyrene–Poly(dimethylsiloxane) Composite Membranes
L. Liang, J. M. Dickson, J. Jiang, and M. A. Brook **2284**
Published online 9 March 2004

Sound Absorption Properties of Thermally Bonded Nonwovens Based on Composing Fibers and Production Parameters
Y. E. Lee and C. W. Joo **2295**
Published online 9 March 2004

Melt Grafting of 10-Undecenoic Acid onto Linear Low Density Polyethylene
A. Ciolino, E. M. Vallés, and M. D. Failla **2303**
Published online 9 March 2004

The Study of Poly(styrene-*co*-*p*-(hexafluoro-2- hydroxylisopropyl)-α-methylstyrene)/Poly(ethylene oxide) Blends
S. Chen, F. Qiu, and L. Tan **2312**
Published online 9 March 2004

Proton Exchange Membranes by Grafting of Styrene–Acrylic Acid onto FEP by Preirradiation Technique. II. Physicochemical Properties of the Membrane and Its Sulfonated Derivatives
S. Phadnis, M. Patri, V. R. Hande, S. Roychoudhury, and P. C. Deb **2318**
Published online 9 March 2004

Flame Retardancy of Poly(butylene terephthalate) Blended with Phosphorous Compounds
T. Ishikawa, I. Maki, and K. Takeda **2326**
Published online 9 March 2004

Preparation of Narrowly Distributed Nanoparticles of Poly(*n*-butyl methacrylate-*co*-vinyl pyrrolidone) through Microemulsion Polymerization
W.-D. He, F.-M. Ye, Y.-M. Wang, and L.-F. Li **2334**
Published online 9 March 2004

Surface Modification of Poly(propylene) by Photoinitiators: Improvement of Adhesion and Wettability
P. Castell, M. Wouters, G. de With, H. Fischer, and F. Huijs **2341**
Published online 9 March 2004

Thermal Stability of Native Polybutylene Terephthalate
V. N. Shelgaev, A. K. Mikitaev, S. M. Lomakin, G. E. Zaikov, and E. V. Koverzanova **2351**
Published online 9 March 2004

Reactive Processing of Nonmiscible Polymers: Shear Rate Effect
J. C. David, Y. Chalamet, and M. Taha **2357**
Published online 9 March 2004

Depolymerization of Poly(trimethylene terephthalate) in Supercritical Methanol
H.-H. Zhang, H.-W. Xiang, Y. Yang, Y.-Y. Xu, and Y.-W. Li **2363**
Published online 9 March 2004

Absorption of Trioctyl Trimellitate into Mass-Polymerization and Suspension-Polymerization Poly(vinyl chloride)
Y. Luo and G. Dai **2369**
Published online 9 March 2004

Phosphonate-Containing Bismaleimide Resins. II. Preparation and Characteristics of Reactive Blends of Phosphonate-Containing Bismaleimide and Epoxy
W.-J. Shu, W.-K. Chin, and H.-J. Chiu **2375**
Published online 9 March 2004

Advances in Stereolithography: A New Experimental Technique in the Production of a Three-Dimensional Plastic Model with an Infrared Laser
A. L. M. Jardini, R. F. Maciel, M. A. F. Scarparo, S. R. Andrade, and L. F. M. Moura **2387**
Published online 10 March 2004

Mechanism Study on Surface Activation of Surfactant-Modified Polyvinyl Siloxane Impression Materials
D.-Y. Lee, Y.-I. Oh, K.-H. Chung, K.-M. Kim, and K.-N. Kim **2395**
Published online 10 March 2004

Significant Decreased Dielectric Constant and Loss of Polystyrene–Clay Nanocomposite Materials by Using Long-Chain Intercalation Agent
H.-W. Wang, K.-C. Chang, H.-C. Chu, S.-J. Liou, and J.-M. Yeh **2402**
Published online 10 March 2004

Investigation of ZnO-Release Behavior of Poly(*N*-isopropylacrylamide-*co*-maleic acid)/ZnO Composite Hydrogels by Differential Pulse Polarography
R. İnam, T. Çaykara, S. Akkoç, and Ö. Kantoğlu **2411**
Published online 10 March 2004

Microwave-Assisted Synthesis of High-Molecular-Weight Poly(ether imide)s by Phase-Transfer Catalysis
C. Gao, S. Zhang, L. Gao, and M. Ding **2415**
Published online 10 March 2004

Frictional Study of Woven Fabrics: The Relationship between the Friction and Velocity of Testing
D. Hermann, S. S. Ramkumar, P. Seshaiyer, and S. Parameswaran **2420**
Published online 10 March 2004

Mechanical and Dynamical Mechanical Properties of Chloroprene Rubber and Cellulose II Composites
A. F. Martins, S. M. de Meneses, L. L. Y. Visconte, and R. C. R. Nunes **2425**
Published online 10 March 2004

Compatibilization Efficiency of Styrene–Butadiene Triblock Copolymers in Polystyrene–Polypropylene Blends with Varying Compositions
D. Hlavatá, J. Hromádková, I. Fortelný, V. Hašová, and J. Pulda **2431**
Published online 10 March 2004

Melt Grafting of *n*-Butyl Methacrylate onto Poly(vinyl chloride): Synthesis and Characterization
A. K. Maiti and M. S. Choudhary **2442**
Published online 10 March 2004

Studies of Sulfonated Polyethylene for Biliary Stent Application
M.-C. Peng, J.-C. Lin, C.-Y. Chen, J.-J. Wu, and X.-Z. Lin **2450**
Published online 10 March 2004

Combined Experimental and Computer Simulation Study of the Kinetics of Solute Release from a Relaxing Swellable Polymer Matrix. I. Characterization of Non-Fickian Solvent Uptake
K. G. Papadokostaki and J. K. Petrou **2458**
Published online 10 March 2004

Combined Experimental and Computer Simulation Study of the Kinetics of Solute Release from a Relaxing Swellable Polymer Matrix. II. Release of an Osmotically Active Solute
K. G. Papadokostaki **2468**
Published online 10 March 2004

Tl(III) Initiated Polymerization of Methyl Methacrylate in Micellar Phase
M. Patra, A. K. Behera, R. K. Behera, and B. K. Sinha **2480**
Published online 10 March 2004

Synthesis and Characterization of New Soluble Poly(ester-imide)s Containing Noncoplanar 2,2′-Dimethyl-4,4′-biphenylene Unit
D.-J. Liaw, C.-L. Fan, C.-C. Lin, and K.-L. Wang **2486**
Published online 10 March 2004

Influence of the Comonomers (Styrene and Methyl Acrylate) on the Rate of Photocrosslinking of 4-{[-3-(4-hydroxybenzylidene)-2-oxocyclohexylidene]methyl}-phenyl Acrylate
A. Arun and B. S. R. Reddy **2494**
Published online 10 March 2004

Kinetics of Polymerization of Dimer Fatty Acids with Ethylenediamine
J. Heidarian, N. M. Ghasem, and W. M. A. W. Daud **2504**
Published online 10 March 2004

Effect of Poly(propylene carbonate) on the Crystallization and Melting Behavior of Poly(β-hydroxybutyrate-*co*-β-hydroxyvalerate)
J. Li, M. F. Lai, and J. J. Liu **2514**
Published online 10 March 2004

Complexation of Poly(dimethylsiloxane)/Poly(methyl methacrylate-*co*-butyl acrylate-*co*-methacrylic acid) Latex with Poly(dimethylsiloxane)/Poly(vinyl acetate-*co*-butyl acrylate) Latex
M. Yang and Y. Dan **2522**
Published online 10 March 2004

Oxygen Permeation Resistance of Polyethylene, Polyethylene/Ethylene Vinyl Alcohol Copolymer, Polyethylene/Modified Ethylene Vinyl Alcohol Copolymer, and Polyethylene/Modified Polyamide–Ethylene Vinyl Alcohol Copolymer Bottles
J.-T. Yeh, S.-S. Huang, W.-H. Yao, I.-J. Wang, and C.-C. Chen **2528**
Published online 10 March 2004

Studies on Poly(Styrene-*co*-Maleic Anhydride)-Modified Polyesteramide-Based Anticorrosive Coatings Synthesized from a Sustainable Resource
F. Zafar, E. Sharmin, S. M. Ashraf, and S. Ahmad **2538**
Published online 10 March 2004

Mechanical Properties of Polystyrene/Polyamide 6 Blends Compatibilized with the Ionomer Poly(Styrene-*co*-sodium Acrylate)
M. E. Villarreal, M. Tapia, S. M. Nuño-Donlucas, J. E. Puig, and R. González-Núñez **2545**
Published online 11 March 2004

Synthesis and Property of Hydrogel Membranes Consisting of Fumaramate with Phosphorylcholine Group
T. Oishi, H. Yamasaki, K. Onimura, T. Fukushima, and S. Morihashi **2552**
Published online 11 March 2004

The Fractal Analysis of Curing Processes of Epoxy Resins
G. V. Kozlov, A. A. Bejev, and Y. S. Lipatov **2558**
Published online 11 March 2004

Dependency of Thermal and Mechanical Properties on the Composition of Mixed-Substituent Poly(fluoroalkoxyphosphazenes)
A. E. Maher, C. M. Ambler, E. S. Powell, and H. R. Allcock **2569**
Published online 11 March 2004

Preparation of Composites of Polymer Liquid Crystal/Cholesteric Liquid Crystal and Their Photochemical Switching and Memory Properties by Photoisomerization of a Chiral Azobenzene Molecule
S. Kurihara, T. Yoshioka, A. M. Zahangir, T. Ogata, and T. Nonaka **2577**
Published online 11 March 2004

Effect of Epolene E-43 as a Compatibilizer on the Mechanical Properties of Palm Fiber–Poly(propylene) Composites
B. F. Abu-Sharkh, R. Kahraman, S. H. Abbasi, and I. A. Hussein **2581**
Published online 11 March 2004

Investigation on the Kinetic Mechanism of Structure Healing for Block Copolymer Materials After Large Elongation
Y. Wang, B. Wang, and J. Shen **2593**
Published online 11 March 2004

New Polyurethane Cationomers with Naphthyl and Phenyltriazene Pendants: Synthesis and Properties
E. C. Buruiana, V. Niculescu, and T. Buruiana **2599**
Published online 11 March 2004

Influence of Acrylonitrile–Butadiene–Styrene (ABS) Morphology and Poly(styrene-*co*-acrylonitrile) (SAN) Content on Fracture Behavior of ABS/SAN Blends
R. S. Yamakawa, C. A. Correa, and E. Hage, Jr. **2606**
Published online 11 March 2004

Temperature/pH-Sensitive Comb-Type Graft Hydrogels Composed of Chitosan and Poly(*N*-isopropylacrylamide)
S. B. Lee, D. I. Ha, S. K. Cho, S. J. Kim, and Y. M. Lee **2612**
Published online 11 March 2004

Evolution of Electrooptical Properties of Epoxy–Amine Thermoset/Liquid Crystal Blends During Polymerization After the Gel Point of the Polymer Matrix
L. Sannier, H. M. Siddiqi, U. Maschke, and M. Dumon **2621**
Published online 11 March 2004

Resistivity of Conductive Polymer–Coated Fabric
P. Lekpittaya, N. Yanumet, B. P. Grady, and E. A. O'Rear **2629**
Published online 11 March 2004

Surface Treatments of Subdenier Monofilament Polypropylene Fibers to Optimize Their Reinforcing Efficiency in Cementitious Composites
M. Pei, D. Wang, Y. Zhao, X. Hu, Y. Xu, J. Wu, and D. Xu **2637**
Published online 11 March 2004

Radiation Synthesis and Characterization of Poly(*N*-vinyl-2-pyrrolidone/acrylic acid) and Poly(*N*-vinyl-2-pyrrolidone/acrylamide) Hydrogels for Some Metal-Ion Separation
E.-S. A. Hegazy, S. E. A. El-Aal, M. F. A. Taleb, and A. M. Dessouki **2642**
Published online 11 March 2004

Analysis of Stability of Food Emulsions by Eyring's Theory: Influence of Different Biopolymers
M. Dolz, M. J. Hernández, C. Cabeza, A. Casanovas, and J. Delegido **2653**
Published online 11 March 2004

Syntheses and Biodegradability of Benzylated Waste Pulps and Graft Copolymers from PBzs and L-Lactic Acid
S. Hadano, S. Maehara, K. Onimura, H. Yamasaki, H. Tsutsumi, and T. Oishi **2658**
Published online 11 March 2004

Structure of Resorcinol, Phenol, and Furan Resins by MALDI-TOF Mass Spectrometry and ^{13}C NMR
A. Pizzi, H. Pasch, C. Simon, and K. Rode **2665**
Published online 11 March 2004

Morphology and Thermodynamic Analysis of Composite Polymer Particles Prepared by Soap-Free Emulsion Polymerization in the Presence of Poly(Methyl Methacrylate) and Polystyrene as Biseeds
X. Pang, G. Cheng, and S. Lu **2675**
Published online 11 March 2004

Pore Structure of Water-Wettable Hydrophobic Resins Based on Divinylbenzene and Methyl Acrylate
J. Wei, X. Zhao, and J. Yan **2681**
Published online 11 March 2004

Relation Between Strain Hardening and Wear Resistance of Polymers
Y. J. Mergler and R. P. Schaake **2689**
Published online 11 March 2004

Synthesis and Lyotropic Behavior of Mesogen-Linked Cellulose Acetates
C. Wu, Q. Gu, R. Zhang, Y. Huang, and S. Chen **2693**
Published online 11 March 2004

Interaction of Poly(maleic anhydride-*alt*-acrylic acid) with Transition Metal Cations, Ni^{2+}, Cu^{2+}, and Cd^{2+}: A Study by UV–Vis Spectroscopy and Viscosimetry
S. Kavlak, H. K. Can, and A. Güner **2698**
Published online 11 March 2004

Effect of Chitin Addition on Injection-Molded Thermoplastic Corn Starch
R. C. R. S. Rosa and C. T. Andrade **2706**
Published online 11 March 2004

Nanocomposites of Poly(vinyl chloride) and Nanometric Calcium Carbonate Particles: Effects of Chlorinated Polyethylene on Mechanical Properties, Morphology, and Rheology
D. Wu, X. Wang, Y. Song, and R. Jin **2714**
Published online 11 March 2004

Simultaneous Multiple Sample Light Scattering for Analysis of Polymer Solutions
M. F. Drenski and W. F. Reed **2724**
Published online 11 March 2004

Synthesis and Pyrolysis of Ti-Containing Precursors for Advanced Si/C/N/Ti-Based Ceramics
Z. Zheng, Y. Li, Y. Luo, S. Su, Z. Zhang, S. Yang, W. Gao, and Z. Xie **2733**
Published online 11 March 2004

NOTE

Appropriate Use of Fick's Equation To Compute Diffusion Coefficients in Pervaporation Experiments
B. V. K. Naidu, L. C. Shetty, and T. M. Aminabhavi **2740**
Published online 11 March 2004

ERRATA

Efficient Method for Recycling Poly(ethylene terephthalate) to Poly(butylene terephthalate) Using Transesterification Reaction
N. G. Kulkarni, C. V. Avadhani, and S. Sivaram **2742**
Published online 11 March 2004

Direct Fluorination of the Polyimide Matrimid® 5218: The Formation Kinetics and Physicochemical Properties of the Fluorinated Layers
A. P. Kharitonov, Y. L. Moskvin, D. A. Syrtsova, V. M. Starov, and V. V. Teplyakov **2743**
Published online 11 March 2004

Effect of Interfacial Stress on the Crystalline Structure of the Matrix and the Mechanical Properties of High-Density Polyethylene/$CaCO_3$ Blends
Y. Zhang and E. Pan **2744**
Published online 11 March 2004

Influence of Diblock Copolymer on the Morphology and Properties of Polystyrene/Poly(dimethylsiloxane) Blends
C. Chuai, S. Li, K. Almdal, J. Alstrup, and J. Lyngaae-Jørgensen **2747**
Published online 17 March 2004

Ethylenediamine Tetraacetic Acid Modification of Crosslinked Chitosan Designed for a Novel Metal-Ion Adsorbent
Y. Shimizu, S. Izumi, Y. Saito, and H. Yamaoka **2758**
Published online 17 March 2004

Allyl Ether-Modified Unsaturated Polyesters for UV/Air Dual-Curable Coatings. I: Synthesis and Characterization of the Oligomers and their Cured Films
H. Yuan, X. Lu, Z. Zeng, J. Yang, and Y. Chen **2765**
Published online 17 March 2004

Allyl Ether-Modified Unsaturated Polyesters for UV/Air Dual-Curable Coatings. II: UV and Air-Curing Behavior
H. Yuan, X. Lu, Z. Zeng, J. Yang, and Y. Chen **2771**
Published online 17 March 2004

Synthesis and Properties of Photoluminescent Copolymer Containing 1,3,4-Oxadiazole and Carbazole Rings
Z. Chen, Y. Liu, C. Zhang, and F. Bai **2777**
Published online 17 March 2004

Response of Human Chondrocytes on Polymer Surfaces with Different Micropore Sizes for Tissue-Engineered Cartilage
S. J. Lee, Y. M. Lee, C. W. Han, H. B. Lee, and G. Khang **2784**
Published online 17 March 2004

Dynamic Mechanical Analysis of Poly(trimethylene terephthalate)—A Comparison with Poly(ethylene terephthalate) and Poly(ethylene naphthalate)
A. R. Mackintosh and J. J. Liggat **2791**
Published online 17 March 2004

Phase Behavior of Ternary Polymer Blends with Hydrogen Bonding
W.-P. Hsu **2797**
Published online 17 March 2004

Modification of Adhesive Properties of a Polyethylene Film by Photografting
O. El Kholdi, L. Lecamp, P. Lebaudy, C. Bunel, and S. Alexandre **2803**
Published online 17 March 2004

Water Vapor Permeability and Mechanical Properties of Fabrics Coated with Shape-Memory Polyurethane
J. W. Cho, Y. C. Jung, B. C. Chun, and Y.-C. Chung **2812**
Published online 17 March 2004

Copolyesters of Poly(Butylene Terephthalate), 1,4-Naphthalene Dicarboxylic Acid, and Hydroquinone Diacetate: A Simple Rate Model
A. Bishara, H. Al-Adwani, and H. I. Shaban **2817**
Published online 17 March 2004

Ultraviolet Light Treatment of Thin High-Density Polyethylene Films Monitored with a Quartz Crystal Microbalance
S. Kihlman Øiseth, A. Krozer, J. Lausmaa, and B. Kasemo **2833**
Published online 17 March 2004

Estimation of the Oxygen-Limiting Amount Consumed by Polymeric Melt in the Thermooxidative Degradation Process
G. V. Kozlov, G. B. Shustov, and G. E. Zaikov **2840**
Published online 17 March 2004

Functional Barriers in PET Recycled Bottles. Part I. Determination of Diffusion Coefficients in Bioriented PET with and Without Contact with Food Simulants
P. Y. Pennarun, P. Dole, and A. Feigenbaum **2845**
Published online 17 March 2004

Functional Barriers in PET Recycled Bottles. Part II. Diffusion of Pollutants During Processing
P. Y. Pennarun, Y. Ngono, P. Dole, and A. Feigenbaum **2859**
Published online 17 March 2004

Effects of Compatibilization of Oxidized Polypropylene on PP Blends of PP/PA6 and PP/Talc
M. Abdouss, N. S. Sanjani, F. Azizinejad, and M. Shabani **2871**
Published online 17 March 2004

Particle Size Distribution Control in Emulsion Polymerization
A. Sood **2884**
Published online 17 March 2004

Diffusion of Unreacted Monomers Detected by ATR FTIR Spectroscopy in a Photosensitive Printing Plate After the Photoreaction
Y. Sakaguchi, K. Kawahara, T. Yamada, Y. Okazaki, and S. Imahashi **2903**
Published online 17 March 2004

Trace Metal Ion Retention Properties of Crosslinked Poly(4-Vinylpyridine) and Poly(Acrylic Acid)
B. L. Rivas, B. Quilodrán, and E. Quiroz **2908**
Published online 17 March 2004

Metal Ion Binding Capability of the Water-Soluble Poly(Vinyl Phosphonic Acid) for Mono-, Di-, and Trivalent Cations
B. L. Rivas, E. Pereira, P. Gallegos, D. Homper, and K. E. Geckeler **2917**
Published online 17 March 2004

Emulsifier-Minor Emulsion Copolymerization of BA-MMA-St-MAA (or AA)-N-MA
L. Tang, J. Yang, S. Zhang, J. Yang, and Y. Wu **2923**
Published online 17 March 2004

Swelling Behavior of Chitosan/Poly(acrylic acid) Complex
T. T. Nge, N. Hori, A. Takemura, and H. Ono **2930**
Published online 17 March 2004

Properties of a New Synthetic Rubber: High-Trans 1,4-Poly(butadiene-*co*-isoprene) Rubber
A. He, W. Yao, B. Huang, Y. Huang, and S. Jiao **2941**
Published online 17 March 2004

Synthesis and Characterization of Propylene-α-Olefin Random Copolymers with Isotactic Propylene Sequence. II. Propylene–Hexene-1 Random Copolymers
Y.-W. Shin, H. Hashiguchi, M. Terano, and K.-h. Nitta **2949**
Published online 17 March 2004

Removal of Metal Ions by Water-Soluble Polymacromonomers in Conjunction with Ultrafiltration Membrane
B. L. Rivas, S. A. Pooley, and A. Maureira **2955**
Published online 17 March 2004

Colorants Based on Renewable Resources and Food-Grade Colorants for Application in Thermoplastics
M. J. A. van den Oever, C. G. Boeriu, R. Blaauw, and J. van Haveren **2961**
Published online 17 March 2004

Preparation and Characterization of Titanium Dioxide Core/Polymer Shell Hybrid Composite Particles Prepared by Emulsion Polymerization
D.-G. Yu, J. H. An, J. Y. Bae, Y. E. Lee, S. D. Ahn, S.-Y. Kang, and K. S. Suh **2970**
Published online 17 March 2004

Modeling PVTX Diagrams: Application to Various Blends Based on Unsaturated Polyester—Influence of Thermoplastic Additive, Fillers, and Reinforcements
N. Boyard, M. Vayer, C. Sinturel, R. Erre, and D. Delaunay **2976**
Published online 17 March 2004

Zone Drawing and Zone Annealing of Poly(ethylene terephthalate) Microfiber Prepared by CO_2 Laser Thinning
A. Suzuki and T. Okano **2989**
Published online 17 March 2004

Radiation Synthesis and Environmental Responsiveness of Semi-Interpenetrating Polymer Networks Composed of Poly(dimethyl–aminoethyl methacrylate) and Poly(ethylene oxide)
Z. Liu, M. Yi, M. Zhai, H. Ha, Z. Luo, and X. Xiang **2995**
Published online 17 March 2004

Syntheses of Hydroxypropyl Methylcellulose Phthalate Gels in Organic Solvents by Radiation Crosslinking
L. Xu, N. Nagasawa, F. Yoshii, and T. Kume **3002**
Published online 18 March 2004

Behavior of Poly(ethylene-*co*-olefin) Polymers as Elastomeric Materials
M. A. López-Manchado, M. Valle, R. Sapunar, and R. Quijada **3008**
Published online 18 March 2004

Fabrication of Three-Dimensionally Ordered Microporous Membrane by Wet Phase Separation
Y. Taketani, S. Nagaoka, and H. Kawakami **3016**
Published online 18 March 2004

1,2-Propanediol–Cellulose–Acrylamide Graft Copolymers
Y. Onishi, G. B. Butler, and T. E. Hogen-Esch **3022**
Published online 18 March 2004

Structural Characterization of Polymer Blends Based on Polysulfones
A. Linares and J. L. Acosta **3030**
Published online 18 March 2004

Synthesis of Urethane Oils from Waste Poly(ethylene terephthalate) Bottles
O. Saravari, B. Vessabutr, and V. Pimpan **3040**
Published online 18 March 2004

Surface Modification of Low-Density Polyethylene Films by a Novel Solution Base Chemical Process
D. Bandopadhay, A. Tarafdar, A. B. Panda, and P. Pramanik **3046**
Published online 18 March 2004

Antioxidant Presence in Thick-Walled High-Density Polyethylene Materials After Rotational Molding
B. L. Weick and R. S. Al-Zubi **3052**
Published online 18 March 2004

A Kinetic Study on the Autocatalytic Cure Reaction of a Cyanate Ester Resin
C.-C. Chen, T.-M. Don, T.-H. Lin, and L.-P. Cheng **3067**
Published online 18 March 2004

Modified Emulsifier-Free Emulsion Polymerization of Butyl Methacrylate with Ionic or/and Nonionic Comonomers
X.-J. Xu and F. Chen **3080**
Published online 18 March 2004

High-Performance Epoxy Hybrid Nanocomposites Containing Organophilic Layered Silicates and Compatibilized Liquid Rubber
J. Fröhlich, R. Thomann, O. Gryshchuk, J. Karger-Kocsis, and R. Mülhaupt **3088**
Published online 18 March 2004

Memory Effects in Supramolecular Networks of Diacids and Polyfunctional Pyridine Derivatives
K. N. Wiegel, A. C. Griffin, M. S. Black, and D. A. Schiraldi **3097**
Published online 18 March 2004

Radiational Hardening of Poly(vinylidene fluoride)–Poly(methyl methacrylate)–Polystyrene Ternary Blends
A. K. Mishra, P. Agrawal, and R. Bajpai **3107**
Published online 23 March 2004

Dependence of Optical Properties on the Preparation Methods of Poly[(9,9′-dialkylfluorene-2,7-diyl)-*alt*-(1,3,4-oxadiazole-2,5-diyl)]
N. C. Yang, C. I. Lee, J. K. Kim, and D. H. Suh **3112**
Published online 23 March 2004

Kaolin Modified with New Resin–Iron Chelate as Flame Retardant System for Polypropylene
A. B. Shehata, M. A. Hassan, and N. A. Darwish **3119**
Published online 23 March 2004

Multienzyme-Immobilized Modified Polypropylene Membrane for an Amperometric Creatinine Biosensor
G.-H. Hsiue, P.-L. Lu, and J.-C. Chen **3126**
Published online 23 March 2004

Immobilization of Lipase on Hydrogels: Structural Aspects of Polymeric Matrices as Determinants of Enzyme Activity in Different Physical Environments
G. S. Chauhan, S. Mahajan, K. M. Sddiqui, and R. Gupta **3135**
Published online 23 March 2004

Simple Method of Related Sensitivity Range To Predict the Thermodynamic Equilibrium Morphology of a Core–Shell Latex Particle
K. Zhao, P. Sun, D. Liu, and L. Wang **3144**
Published online 23 March 2004

Dynamic Rheological Properties of High-Density Polyethylene/Polystyrene Blends Extruded in the Presence of Ultrasonic Oscillations
G. Chen, S. Guo, and Y. Li **3153**
Published online 23 March 2004

Combustion-Thermal-Sprayed Recycled Poly(ethylene terephthalate)
J. R. Tavares Branco, S. R. Vieira Campos, L. T. Duarte, and V. de Freitas Cunha Lins **3159**
Published online 23 March 2004

Analysis of Low-Density Polyethylene-*g*-Poly(vinyl chloride) Copolymers Formed in Poly(vinyl chloride)/Low-Density Polyethylene Melt Blends with Gel Permeation Chromatography and Solid-State ^{13}C-NMR
N. Sombatsompop, K. Sungsanit, and C. Thongpin **3167**
Published online 23 March 2004

Synthesis and Characterization of New Polyamides Derived from 4-(4′-Aminophenyl)urazole and Aliphatic Diacid Chlorides
S. Mallakpour and Z. Rafiee **3173**
Published online 23 March 2004

Determination of Dissociable Groups in Natural and Regenerated Cellulose Fibers by Different Titration Methods
L. Fras, J. Laine, P. Stenius, K. Stana-Kleinschek, V. Ribitsch, and V. Doleček **3186**
Published online 23 March 2004

Study on Hot Air Aging and Thermooxidative Degradation of Peroxide Prevulcanized Natural Rubber Latex Film
B.-L. Zhang, M. Chen, N.-J. Ao, W.-Y. Deng, and H.-L. Liu **3196**
Published online 23 March 2004

Studying the Mechanisms of Titanium Dioxide as Ultraviolet-Blocking Additive for Films and Fabrics by an Improved Scheme
H. Yang, S. Zhu, and N. Pan **3201**
Published online 23 March 2004

Effects of Solvent Adsorption on Solution Properties of Poly(vinyl alcohol)/Dimethylsulfoxide/Water Ternary Systems
S.-J. Hong, H.-T. Huang, and P.-D. Hong **3211**
Published online 23 March 2004

Crashworthiness of Automotive Composite Material Systems
G. C. Jacob, J. F. Fellers, J. M. Starbuck, and S. Simunovic **3218**
Published online 23 March 2004

Determination of the Saturation Adsorption of Surfactant in Polymer Latices
P. Roose and P. De Doncker **3226**
Published online 23 March 2004

Biodegradable Soy Protein–Polyester Blends by Reactive Extrusion Process
D. Graiver, L. H. Waikul, C. Berger, and R. Narayan **3231**
Published online 23 March 2004

Determination of Monomer Reactivity Ratios Using *In situ* FTIR Spectroscopy for Maleic Anhydride/Norbornene-Free-Radical Copolymerization
A. J. Pasquale and T. E. Long **3240**
Published online 23 March 2004

Effect of Hydroperoxide Decomposer and Slipping Agent on Recycling of Polypropylene
A. K. Agrawal, S. K. Singh, and A. Utreja **3247**
Published online 23 March 2004

Internal Lipid Content and Viscoelastic Behavior of Wool Fibers
M. Marti, A. M. Manich, M. H. Ussman, I. Bondia, J. L. Parra, and L. Coderch **3252**
Published online 23 March 2004

Effect of 2-Mercaptobenzothiazole Level on Kinetics of Natural Rubber Vulcanization
P.-y. Wang, H.-l. Qian, and H.-p. Yu **3260**
Published online 25 March 2004

Synthesis and Characteristics of Biodegradable Copolyesters from the Transesterification of Poly(butylene adipate-*co*-succinate) and Poly(ethylene terephthalate)
S.-W. Kim, J.-C. Lim, D.-J. Kim, and K.-H. Seo **3266**
Published online 25 March 2004

Production of Polymeric Membranes Made of Polypropylene, Poly(ethylene-*co*-vinyl acetate), and Poly(vinyl alcohol)
A. Maciel, M. Aguilar, A. Luis, and O. Manero **3275**
Published online 25 March 2004

Thermal and Morphological Study of Polyurethanes Based on Eucalyptus Tar Pitch and Castor Oil
B. N. Melo and V. M. D. Pasa **3287**
Published online 25 March 2004

Synthesis and Surface-Active Properties of a Trisiloxane-Modified Oligo(propylene oxide-*block*-ethylene oxide) Wetting Agent
D.-W. Kim and S.-T. Noh **3292**
Published online 25 March 2004

Study of Cationic Ring-Opening Photopolymerizations Using Optical Pyrometry
J. V. Crivello, B. Falk, and M. R. Zonca, Jr. **3303**
Published online 25 March 2004

Rice Husk Powder–Filled Polystyrene/Styrene Butadiene Rubber Blends
M. Zurina, H. Ismail, and A. A. Bakar **3320**
Published online 25 March 2004

Synthesis of Aliphatic Polyesters by a Chain-Extending Reaction with Octamethylcyclotetrasilazane and Hexaphenylcyclotrisilazane as Chain Extenders
J.-B. Zhao, X.-F. Wu, and W.-T. Yang **3333**
Published online 25 March 2004

Modeling the Curing Kinetics for a Modified Bismaleimide Resin Using Isothermal DSC
Z.-S. Guo, S.-Y. Du, B.-M. Zhang, and Z.-J. Wu **3338**
Published online 25 March 2004

Dyeing of Wool with Antibiotics to Develop Novel Infection Resistance Materials for Extracorporeal End Use
H.-M. Choi, M. Bide, M. Phaneuf, W. Quist, and F. LoGerfo **3343**
Published online 25 March 2004

Binding of Methyl Orange or Ethyl Orange Dyes by Some Dioxolane Copolymers: Synthesis of the Copolymers and Thermodynamics of the Dye–Copolymer Interactions
N. N. Ceylan and Z. Ilter **3355**
Published online 25 March 2004

Effect of an Obstacle During Processing on the Weld Line of Injection-Molded Glassy Polystyrene: Microhardness Study
T. Nguyen-Chung, G. Mennig, M. Boyanova, S. Fakirov, and F. J. Baltá Calleja **3362**
Published online 25 March 2004

Determination of Monomer Reactivity Ratios in Styrene/2-Ethylhexylacrylate Copolymer
A. Kavousian, F. Ziaee, M. H. Nekoomanesh, M. J. Leamen, and A. Penlidis **3368**
Published online 25 March 2004

Mechanical Properties, Morphological Structure, and Thermal Behavior of Dynamically Photocrosslinked PP/EPDM Blends
L. Tang, B. Qu, and X. Shen **3371**
Published online 25 March 2004

Enantioselective Esterification Reaction Using Immobilized *Candida rugosa* Lipase on Poly(*N*-vinyl-2-pyrrolidone-*co*-styrene) Hydrogel
A. Harun, M. Basri, M. B. Ahmad, and and A. B. Salleh **3381**
Published online 25 March 2004

Step-Strain Stress Relaxation of Carbon Black-Loaded Natural Rubber Vulcanizates
T. M. Madkour **3387**
Published online 25 March 2004

Dynamic Mechanical and Raman Spectroscopy Studies on Interaction between Single-Walled Carbon Nanotubes and Natural Rubber
M. A. López-Manchado, J. Biagiotti, L. Valentini, and J. M. Kenny **3394**
Published online 25 March 2004

Natural Rubber/Ethylene Propylene Diene Blends for High Insulation Iron Crossarms
S. Kiatkamjornwong and K. Pairpisit **3401**
Published online 25 March 2004

Preparation of Superabsorbent Polymer with Slow-Release Phosphate Fertilizer
F. Zhan, M. Liu, M. Guo, and L. Wu **3417**
Published online 25 March 2004

Superabsorbent Polymeric Materials. XII. Effect of Montmorillonite on Water Absorbency for Poly(Sodium Acrylate) and Montmorillonite Nanocomposite Superabsorbents
W.-F. Lee and L.-G. Yang **3422**
Published online 25 March 2004

Preparation and Structure and Mechanical Properties of Poly(Styrene-*b*-butadiene)/Clay Nanocomposites
M. Liao, J. Zhu, H. Xu, Y. Li, and W. Shan **3430**
Published online 25 March 2004

ISSUE NUMBER 6 / JUNE 15, 2004

Preparation and Structural Characterization of Melamine–Methylurea–Formaldehyde Resin and Its Blends Separately with Ethyl Cellulose, Starch, Teakwood, and Almond Shell Powders by ^{13}C NMR, IR, TGA, and SEM Techniques
M. Singh **3437**
Published online 26 March 2004

Synthesis and Properties of New Poly(amide imide)s Containing Trimellitic Rings and Hydantoin Moieties in the Main Chain under Microwave Irradiation
K. Faghihi and M. Hajibeygi **3447**
Published online 26 March 2004

Morphology and Properties of Isotactic Polypropylene Modified with Hydrocarbon Resin MBG273. I. Binary Blends
S. Cimmino, C. Silvestre, and G. della Vecchia **3454**
Published online 26 March 2004

Poly(*N*-isopropylacrylamide) Grafted to a Strongly Charged Backbone: Thermoresponsive Behavior in Aqueous Solution
N. Chourdakis, G. Bokias, and G. Staikos **3466**
Published online 26 March 2004

Thermal Behavior of Some Homogeneously Polymethyl Methacrylate (PMMA)-Grafted High α-Cellulose Products
P. Das, C. N. Saikia, and N. N. Dass **3471**
Published online 26 March 2004

Synthesis and Characterization of Hetarylazo Disperse Dyes Derived from Substituted *N*-β-Acetoxyethylanilines—Application on Cellulose Acetate
K. L. Georgiadou, E. G. Tsatsaroni, and A. H. Kehayoglou **3479**
Published online 26 March 2004

Photopolymerization Kinetics of an Epoxy-based Resin for Stereolithography
C. Esposito Corcione, A. Greco, and A. Maffezzoli **3484**
Published online 26 March 2004

Synthesis of Novel Block Copolymers Containing Polyamide4 Segments and Control of Their Biodegradability
K. Hashimoto, M. Sudo, T. Sugimura, and Y. Inagaki **3492**
Published online 26 March 2004

Structure–Property Relationship and Influences of Phenolic Compounds on the Mechanical and Thermomechanical Properties of UV-Cured Acrylic Resin Networks
S. Yin, A. Merlin, A. Pizzi, X. Deglise, B. George, and M. Sylla **3499**
Published online 26 March 2004

Compatibility of Poly(butadiene-*co*-acrylonitrile) with Poly(L-lactide) and Poly(3-hydroxybutyrate-*co*-3-hydroxyvalerate)
E.-S. Park, H. K. Kim, J. H. Shim, H. S. Kim, L. W. Jang, and J.-S. Yoon **3508**
Published online 26 March 2004

Eucalyptus Bark Lignin Substituted Phenol Formaldehyde Adhesives: A Study on Optimization of Reaction Parameters and Characterization
M. A. Khan, S. M. Ashraf, and V. P. Malhotra **3514**
Published online 26 March 2004

Distinct Composite Structure and Properties of $Eu(phen)_2Cl_3(H_2O)_2$ in Poly(methyl methacrylate) and Polyvinylpyrrolidone
H.-G. Liu, Y.-I. Lee, W.-P. Qin, K. Jang, S. Kim, and X.-S. Feng **3524**
Published online 26 March 2004

Use of Epoxidized Rubber Seed Oil as a Coupling Agent and a Plasticizer in Silica-Filled Natural Rubber Compounds
R. Joseph, R. Alex, K. N. Madhusoodanan, C. K. Premalatha, and B. Kuriakose **3531**
Published online 26 March 2004

Recovery in Spider Silk Fibers
M. Elices, J. Pérez-Rigueiro, G. Plaza, and G. V. Guinea **3537**
Published online 26 March 2004

Preparation, Morphology, and Mechanical Properties of Elastomers Based on α,ω -Dihydroxy-polydimethylsiloxane/polystyrene Blends
J. Dong, Z. Liu, N. Han, Q. Wang, and Y. Xia **3542**
Published online 26 March 2004

Effects of Aluminum Alkyls on Ethylene/1-Hexene Polymerization with Supported Metallocene/MAO Catalysts in the Gas Phase
H. Hammawa, T. M. Mannan, D. T. Lynch, and S. E. Wanke **3549**
Published online 26 March 2004

Rheological and Thermal Properties of Thermoplastic Natural Rubbers Based on Poly(methyl methacrylate)/Epoxidized-Natural-Rubber Blends
C. Nakason, Y. Panklieng, and A. Kaesaman **3561**
Published online 26 March 2004

Preparation and Properties of Polyimide–Clay Nanocomposite Materials for Anticorrosion Application
Y.-H. Yu, J.-M. Yeh, S.-J. Liou, C.-L. Chen, D.-J. Liaw, and H.-Y. Lu **3573**
Published online 26 March 2004

Organomodified Montmorillonite as Filler in Natural and Synthetic Rubber
P. Bala, B. K. Samantaray, S. K. Srivastava, and G. B. Nando **3583**
Published online 26 March 2004

Thermal Bonding of Polypropylene Nonwovens: Effect of Bonding Variables on the Structure and Properties of the Fabrics
G. S. Bhat, P. K. Jangala, and J. E. Spruiell **3593**
Published online 26 March 2004

Prediction of Kinetic Curves of Oxygen Consumption on a Thermooxidative Degradation Process for Polymer Melts
G. V. Kozlov and G. E. Zaikov **3601**
Published online 5 April 2004

Crosslinking Reaction of Polyacrylate Soap-Free Hydrosol with Zirconium Chelate
Z. Huang, Z. Xie, and Z. Li **3605**
Published online 5 April 2004

Crystallization and Melt Behavior of $Mg(OH)_2$/PP Composites Modified by Functionalized Polypropylene
Z. Lin, Y. Qiu, and K. Mai **3610**
Published online 5 April 2004

Graft Copolymerization of Nitrile Monomers onto Bleached Jute Fiber Using Potassium Persulfate System and Their Textile Characteristics
M. I. H. Mondal, R. Alam, and M. A. Sayeed **3622**
Published online 5 April 2004

Enzymatically Degradable and pH-Sensitive Hydrogels for Colon-Targeted Oral Drug Delivery. I. Synthesis and Characterization
S. K. Bajpai and S. Saxena **3630**
Published online 5 April 2004

Bending-Electrostrictive Response of Polyurethane Films Subjected to a Reversed Electric Field
M. Watanabe and T. Hirai **3644**
Published online 5 April 2004

Preparation and Swelling Characterization of Poly (*n*-isopropylacrylamide)-Based Porous Hydrogels
J.-M. Chern, W.-F. Lee, and M.-Y. Hsieh **3651**
Published online 5 April 2004

Cellulose Acetate–Poly(ether sulfone) Blend Ultrafiltration Membranes. II. Application Studies
R. Mahendran, R. Malaisamy, G. Arthanareeswaran, and D. Mohan **3659**
Published online 5 April 2004

Superabsorbent Polymeric Materials. XI. Effect of Nonionic Monomers on the Swelling Behavior of Crosslinked Poly(sodium acrylate-*co*-nonionic monomers) in Aqueous Salt Solutions
W.-F. Lee and L.-G. Yang **3666**
Published online 5 April 2004

Comparison of Maleic Anhydride Grafting onto Powder and Granular Polypropylene in the Melt by Reactive Extrusion
Y. Güldoğan, S. Eğri, Z. M. O. Rzaev, and E. Pişkin **3675**
Published online 5 April 2004

Chromatographic Performance of Monodisperse Macroporous Particles Produced by Modified Seeded Polymerization. II. The Effect of the Diluent/Seed-Latex Ratio
S. T. Camli, E. Unsal, S. Senel, and A. Tuncel **3685**
Published online 5 April 2004

Surface Modification of Single-Walled Carbon Nanotubes with Polyethylene via *In Situ* Ziegler–Natta Polymerization
X. Tong, C. Liu, H.-M. Cheng, H. Zhao, F. Yang, and X. Zhang **3697**
Published online 5 April 2004

Thermal Stability of Polycaprolactone/Nafion Blends Prepared in the Presence of 3-Aminopropyltriethoxysilane
S. Navarro Cassu, R. Aparecida Zoppi, and M. Isabel Felisberti **3701**
Published online 5 April 2004

Effect of Radiation Dose on the Thermal Degradation of Poly(ethylene terephthalate) Fabric
E. H. El-Gendy and I. A. El-Shanshoury **3710**
Published online 5 April 2004

Bonding Properties of Epoxy Resins Containing Two Mesogenic Groups
M. Ochi, D. Hori, Y. Watanabe, H. Takashima, and M. Harada **3721**
Published online 5 April 2004

Synthesis of a Polyacrylamidoxime Chelating Fiber and Its Efficiency in the Retention of Palladium Ions
N. Bilba, D. Bilba, and G. Moroi **3730**
Published online 5 April 2004

Influence of Quaternary Ammonium Salt Addition on the Surface Activity of Polyacrylic Dispersants
I. Pantchev and D. J. Hunkeler **3736**
Published online 5 April 2004

Thermal and Flow Property–Morphology Relationship of Sugarcane Bagasse Fiber-Filled Polyamide 6 Blends
R. Dweiri and C. H. Azhari **3744**
Published online 5 April 2004

New Side-Chain Nematic Liquid Crystalline Elastomers Containing Smectic Crosslinking Units
Y. Guan, Y. Yu, B.-Y. Zhang, and L.-F. Zhang **3755**
Published online 5 April 2004

The Diffusion of Gases in Semicrystalline Polyethylene and Its Melt
G. V. Kozlov and G. E. Zaikov **3761**
Published online 5 April 2004

Synthesis and Characterization of PSt-*b*-PDMS-*b*-PSt Copolymers by Atom Transfer Radical Polymerization
H. Peng, S. Cheng, and Z. Fan **3764**
Published online 8 April 2004

The Effect of Maleic Anhydride Modified Polypropylene on the Mechanical Properties of Feather Fiber, Kraft Pulp, Polypropylene Composites
T. A. Bullions, R. A. Gillespie, J. Price-O'Brien, and A. C. Loos **3771**
Published online 8 April 2004

Oligonucleotide Synthesis onto Poly(*N*-acryloylmorpholine-*co*-*N*-acryloxysuccinimide): Assessment of the Resulting Conjugates in a DNA Sandwich Hybridization Test
C. Minard-Basquin, C. Chaix, F. D'Agosto, M.-T. Charreyre, and C. Pichot **3784**
Published online 8 April 2004

Aspects of the Crosslinking of Polyethylene with Vinyl Silane
G. B. Shah, M. Fuzail, and J. Anwar **3796**
Published online 8 April 2004

Effect of Polyvinylpyrrolidone on Morphology and Performance of Hemodialysis Membranes Prepared from Polyether Sulfone
J. Barzin, S. S. Madaeni, H. Mirzadeh, and M. Mehrabzadeh **3804**
Published online 8 April 2004

Use of Acrylate-Based Liquid Rubbers as Toughening Agents and Adhesive Property Modifiers of Epoxy Resin
S. Kar and A. K. Banthia **3814**
Published online 8 April 2004

Curing Behavior of Epoxy Resin/Tung Oil Anhydride Exfoliated Nanocomposite by Differential Scanning Calorimetry
S. Bao, S. Shen, G. Liang, H. Zhai, W. Xu, and P. He **3822**
Published online 8 April 2004

Hydrolytic Aging of Polypropylene Studied by X-Ray Photoelectron Spectroscopy
S. Massey, A. Adnot, and D. Roy **3830**
Published online 8 April 2004

Study on Morphology Behavior of PVDF-Based Electrolytes
L.-y. Tian, X.-b. Huang, and X.-z. Tang **3839**
Published online 8 April 2004

Adhesion Mechanisms in the Solid-State Bonding Technique Using Submicrometer Aromatic Thermosetting Copolyester Adhesive
K. Xu, J. C. Selby, M. A. Shannon, and J. Economy **3843**
Published online 8 April 2004

Mechanical Properties and Biodegradability of Green Composites Based on Biodegradable Polyesters and Lyocell Fabric
M. Shibata, S. Oyamada, S.-i. Kobayashi, and D. Yaginuma **3857**
Published online 8 April 2004

Metallization of Crosslinked Acrylate Resin by Reduction of Polymer-Incorporated Metal Ion
M. Shibata, T. Abe, and T. Uda **3864**
Published online 8 April 2004

Preparation, Properties, and Mathematical Modeling of Microparticle Drug Delivery Systems Based on Biodegradable Amphiphilic Triblock Copolymers
G.-P. Yan, H. Li, S.-X. Cheng, S. E. Bottle, X.-G. Wang, Y. K. Yew, and R.-X. Zhuo **3869**
Published online 8 April 2004

Synthesis of Fluoroalkyl End-Capped Preoligomers Containing Succinimidyl Segments—Application to Novel Fluorinated Oligomers Possessing Surface Antibacterial Activity
H. Sawada, K. Yanagida, T. Kawase, Y. Inaba, K. Sasazawa, and M. Sugiya **3874**
Published online 8 April 2004

Removal of Cu(II) from Aqueous Solutions by Chelating Starch Derivatives
Y. J. Li, B. Xiang, and Y. M. Ni **3881**
Published online 8 April 2004

Physical Properties and Reaction Kinetics of Cotton Cellulose Crosslinked with Dimethyloldihydroxyethyleneurea–Maleic Acid
H.-H. Hsiung, H.-Y. Huang, Y.-H. Wang, C. Wang, J.-C. Chen, and C.-C. Chen **3886**
Published online 8 April 2004

Study on Processing of Ultrahigh Molecular Weight Polyethylene/Polypropylene Blends: Capillary Flow Properties and Microstructure
G. Liu, Y. Chen, and H. Li **3894**
Published online 8 April 2004

Interlayer Delamination and Adhesion of Coextruded Films
H. Zhou **3901**
Published online 8 April 2004

Effects of a Mixture of Stabilizers on the Structure and Mechanical Properties of Polyethylene During Reprocessing
M. J. Abad, A. Ares, L. Barral, J. Cano, F. J. Díez, S. García-Garabal, J. López, and C. Ramírez **3910**
Published online 8 April 2004

Synthesis and Characterization of a Cation-Exchange Resin Based on Vinylpyrrolidone-*co*-divinylbenzene: Effect of Nature and Amount of Diluent on Different Resin Properties
S. A. Raza Zaidi, S. W. Ali, and G. B. Shah **3917**
Published online 8 April 2004

Ultraviolet-Curing Behavior and Mechanical Properties of a Polyester Acrylate Resin
D. S. Kim and W. H. Seo **3921**
Published online 8 April 2004

Volume Title Page **3929**

Author Index to Volume 92 *3931*

Subject Index to Volume 92 *3955*

Volume Contents to Volume 92 *I*